

ENVIRONMENTAL CORRESPONDENCE

Document Title: Industrial Storm Water Pollution Prevention Plan - Rev. 5

Document Description: Industrial Storm Water Pollution Prevention Plan - Rev. 5

| To | Action Required | Signature / Date |
|---------------|---|---------------------|
| Monica Hultay | REVIEW <input type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input type="checkbox"/> | |
| Rose Herrera | REVIEW <input type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input checked="" type="checkbox"/> | <i>RMH</i> 11/18/13 |
| Linda Wilson | REVIEW <input checked="" type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input type="checkbox"/> | <i>LW</i> 11/19/13 |
| Mitch Beekman | REVIEW <input checked="" type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input type="checkbox"/> | <i>MB</i> 11/22/13 |
| Nick Spencer | REVIEW <input type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input checked="" type="checkbox"/> | <i>NS</i> 11/21/13 |
| | REVIEW <input type="checkbox"/> MAIL <input type="checkbox"/> SIGNATURE <input type="checkbox"/> | |

Originator/SME: Patty Peterson

Date Prepared and routed for Review: November 12, 2013

Exceedance or Excess Emissions:

YES ☐

NO ☒

See comments below for additional information.

To Whom:

USEPA ☐ BP ☐
IDEM ☐ OTHER ☒
HDEM ☐ Internal

Regulated Area:

WATER ☒
AIR ☐
RCRA ☐
OTHER ☐

Nature of the Document:

ROUTINE ☐ PERMIT RENEWAL ☐
CONSENT DECREE ☐ REPORT ☐
SPECIAL ☐ DATA ☐
NEW PERMIT ☐ PLANS ☒
NOTIFICATION ☐

Frequency:

MONTHLY ☐ QUARTERLY ☐
SEMIANNUALLY ☐ ANNUALLY ☐
VARIABLE ☐
OTHER ☒ As needed

Mail ORIGINAL ☒
COPIES ☒ Number: 0

Mailing Deadline: N/A

Special Mailing Instructions:

OVERNIGHT ☐ CERTIFIED ☐
REGULAR ☐ OTHER ☐

Mailed By (sign & date): N/A

Certified letter tracking Numbers:

Responsible Official Certification:

YES ☒
NO ☐

ACCURACY REVIEW COMPLETED BY:

Stormwater SME: ☒ Patty Peterson/ *PJP* 11/12/13
☐
☐
☐
☐

initials/date

COMMENTS: Updated to reflect recommendations from the Annual SW Compliance Evaluation

SEE ATTACHED SUMMARY

File Plan Code: 4-J-01

Document ID WBU-DENV-4J01-45606

Stormwater Pollution Prevention Plan – Rev 5

Summary of edits:

The Annual Stormwater Compliance Evaluation requires the Team to conduct a comprehensive compliance evaluation to confirm the accuracy of the description of potential pollution sources contained in the plan, determine the effectiveness of the plan, and assess compliance with the permit. Based on the results of the evaluation the plan shall be revised as appropriate.

Section 2.3 of the Annual Stormwater Compliance Evaluation Report recommended the following changes to the SWPPP.

1. For the Lake George Area, stormwater can be routed under Cline Avenue to discharge to via Outfall 003. However, it is the current practice to pump all the stormwater from the Lake George area to the Lakefront. The SWPPP should include reference to both stormwater discharge options. (SWPPP Section 4.1.3)

SWPPP Rev 5 Edit – page 13: Section 4.1.3 – Last sentence was added “It is the current practice to normally pump stormwater from the Lake George area to the Lakefront WWTP.”

2. The SWPPP should include clear expectations for materials, stock and spoil pile management. The section for stock and spoil pile management appears of reference language from a construction SWPPP and does not address on-going working material piles. (SWPPP Section 5.2.2 and 5.4.1)

SWPPP Rev 5 Edits - pages 22 & 23: Section 5.2.2 – a paragraph that included language appropriate for a Construction SWPPP was replaced with “On-going working piles, require the installation of sediment barrier measures along the down-slope side of all soil stockpiles/borrow areas prior to placement of the stockpiles or removal of any material from the area.

Unvegetated areas likely to be left inactive for fifteen (15) days or more are temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. Alternative measures to site stabilization are acceptable if the project owner or their representative can demonstrate they have implemented erosion and sediment control measures adequate to prevent sediment discharge.”

Section 5.4.1 Non-Structural BMPs – The following additional bullets were added to Storage areas:

- *Soil and material storage without silt fencing or other controls may be located in areas where there is no potential impact only with approval from Environmental.*
 - *Dormant piles and pile remnants shall be removed.*
 - *Soil and material storage areas shall be managed and an owner identified to the asset area superintendent.*
3. BMPs list “Covered truck beds when payload is full.” Because Indiana DOT regulations do not require covered truck beds and the posted speed limit of 20 mph in J&L areas this BMP is not required. (SWPPP Section 5.4.1)

SWPPP Rev. 5 Edits – page 24: Section 5.4.1 Non-Structural BMPs – the following bullet was removed:

- *Covered truck beds when payload is full*

PJP
11/15/2013



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001

**Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5**

**BP Products North America Inc.
Whiting Business Unit
Whiting, Indiana**

Industrial Storm Water Pollution Prevention Plan

Document ID WBU-DENV-4J01-45606



Contents

| | |
|---|-----------|
| 1.0 INTRODUCTION | 5 |
| 1.1 ISO 14001 Document Control | 5 |
| 2.0 STORM WATER POLLUTION PREVENTION (SWPP) TEAM | 6 |
| 2.1 SWPP Team | 6 |
| 2.2 SWPP Team Responsibilities | 7 |
| 2.2.1 SWPP Team Chair | 7 |
| 2.2.2 SWPP Managers | 7 |
| 2.2.3 Other SWPP Team Members | 8 |
| 3.0 J&L AND LAKE GEORGE SITE DESCRIPTIONS | 9 |
| 3.1 Site Location | 9 |
| 3.2 Soil Condition | 9 |
| 3.3 Land Cover | 9 |
| 3.4 Storm Water Drainage and Outfall Descriptions | 9 |
| 3.5 Storm Water Control Features | 10 |
| 4.0 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES SPECIFIC TO J&L TANK FIELD OUTFALLS 003 and 004 | 11 |
| 4.1 Industrial Activities | 11 |
| 4.1.1 J&L Tank Field Northern Section | 12 |
| 4.1.2 J&L Tank Field Southern Section | 12 |
| 4.1.3 Lake George Area | 13 |
| 4.2 Non-Tank Dike Storm Water Drainage Conveyance System | 14 |
| 4.2.1 J&L Basin 2 | 14 |
| 4.2.2 J&L Basin 3 | 14 |
| 4.2.3 J&L Basin 4 | 14 |
| 4.2.4 J&L Basin 5 | 15 |
| 4.2.5 J&L Basin 6 | 15 |
| 4.2.6 J&L Basin 7 | 15 |
| 4.2.7 J&L Basin 8 | 15 |
| 4.2.8 J&L Basin 9 | 16 |
| 4.3 Approved Non-Storm Water Discharges | 16 |
| 4.4 Past Spills and Leaks | 17 |



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

| | | |
|------------|--|-----------|
| 4.5 | Assessment Summary | 17 |
| 4.6 | Management of Storm Water under Agreed Order..... | 18 |
| 5.0 | STORM WATER BEST MANAGEMENT PRACTICES (BMPs) | 20 |
| 5.1 | Non-Structural BMPs..... | 20 |
| 5.1.1 | Good Housekeeping..... | 20 |
| 5.1.2 | Preventative Maintenance..... | 20 |
| 5.1.3 | Spill Response..... | 21 |
| 5.1.4 | Material Handling, Storage and Disposal | 21 |
| 5.1.5 | Residual Management & Recycling..... | 21 |
| 5.1.6 | Outfalls 003 and 004 Water Quality Sampling and Operation Procedures | 21 |
| 5.2 | Existing Structural BMPs..... | 21 |
| 5.2.1 | Sediment Transport and Site Stabilization | 22 |
| 5.2.2 | Stock and Spoil Piles..... | 22 |
| 5.2.3 | Storm Water Conveyance and Retention Areas | 22 |
| 5.2.4 | Secondary Containment..... | 22 |
| 5.2.5 | Treatment..... | 23 |
| 5.3 | Planned BMPs for Future Implementation | 23 |
| 5.3.1 | J&L Capital Improvement for Outfalls 003 and 004 | 23 |
| 5.4 | BMP Lists..... | 23 |
| 5.4.1 | Non-Structural BMPs..... | 23 |
| 5.4.2 | Structural BMPs..... | 24 |
| 6.0 | EMPLOYEE TRAINING PROGRAM..... | 25 |
| 6.1 | Storm Water Specific Training | 25 |
| 7.0 | STORM WATER MONITORING PROGRAM AND INSPECTIONS | 26 |
| 7.1 | Storm Water Comprehensive Site Compliance Evaluation | 26 |
| 7.2 | Storm Water Management Measures and Conveyance Inspections..... | 26 |
| 8.0 | REPORTING AND PLAN REVISIONS | 28 |
| 8.1 | Annual reporting | 28 |
| 8.1.1 | Availability of Reports | 28 |
| 8.2 | Recordkeeping | 28 |
| 8.3 | Plan Revisions | 28 |



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision # 5

| | |
|---|---------------|
| 9.0 CERTIFICATION OF INFORMATION..... | 29 |
| 9.1 Certification | 30 |
| 9.1.1 General | 30 |
| 9.1.2 Storm Water and Non-storm Water Discharge Certification | 30 |
| 9.2 Qualified Professional Certification | 30 |
| 10.0 REFERENCES | 31 |
| 11.0 REVISION HISTORY | 32 |

List of Tables

| | |
|---------|---|
| Table 1 | List of SWPP Team and Responsibilities |
| Table 2 | Impervious Surface Area |
| Table 3 | CERCLA Reportable Spills and Leaks for Period from 2/09 to 2/12 |
| Table 4 | Types of Materials that could impact Stormwater Lake George and J&L Tank Fields |

List of Figures

| | |
|----------|---|
| Figure 1 | Refinery Area Site Map Depicting Elevation, Facility Boundaries, and Receiving Waters |
| Figure 2 | J&L Area Site Map Depicting Elevation, Boundaries, and Receiving Waters |
| Figure 3 | Refinery Soils and Topographic Map |
| Figure 4 | J&L Soils and Topographic Map |
| Figure 5 | J&L Storm Water Map |
| Figure 6 | Aerial Ortho-image of BP Whiting Refinery and Impervious Surface Estimate |
| Figure 7 | Refinery Wellpoint System and Major Drainage Structures |
| Figure 8 | Agreed Order Map of Subsurface Contamination Plume, J&L and Lake George Areas |

List of Appendices

| | |
|------------|--|
| Appendix A | Forms |
| Appendix B | NPDES Permit IN0000108 Cross reference with SWPPP for Outfalls 003 and 004 |



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision # 5

1.0 INTRODUCTION

This Storm Water Pollution Prevention Plan (SWPPP) applies to the areas contributing to Outfalls 003 and 004 at the BP Products North America Inc. (BP) Whiting Refinery (the facility) located in Whiting, Indiana. This SWPPP is intended to comply with the requirements of the August 1, 2007 NPDES Permit No. IN0000108 (Permit), issued to BP by the Indiana Department of Environmental Management (IDEM).

The SWPPP was last updated in April 2012 based on findings from the 2011 Annual Comprehensive Site Compliance Evaluation for Storm Water Pollution Prevention and the National Pollutant Discharge Elimination System (NPDES), Water Usage, and Sanitary Wastewater Audit Report (Trinity Consultants, November 2011). The plan was originally prepared and subsequently updated by AECOM Technical Services, Inc. (AECOM) (AECOM, update December 2010).

Appendix B contains a cross reference of the SWPPP with the corresponding sections in the NPDES permit Part I.D.

1.1 ISO 14001 Document Control

To comply with Whiting ISO 14001 Document Control procedure, the follow sections have been added.

1. PURPOSE

IDEM issued NPDES Permit No. IN0000108 to the BP Whiting Refinery on June 21, 2007 in accordance with Section 402 and 405 of the Federal Water Pollution Control Act, as amended, and Indiana Code 13-15. The Permit was effective on August 1, 2007 which required the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution, describe practices and measures for reducing pollution potential, and assure compliance with the permit

2. APPLICABILITY

In accordance with the Permit, this SWPPP is required to address storm water discharges routed to Outfalls 003 and 004. It is not required to address storm water discharges that are routed to the Lakefront Outfall 005, previously known as outfall 001. However, a SWPPP Guidance that covers the Whiting Refinery property area, has been created as an environmental E-Talk.



2.0 STORM WATER POLLUTION PREVENTION (SWPP) TEAM

This section identifies the SWPP Team responsible for development, implementation, maintenance, and revision of this plan or its components. All BP Whiting employees and BP contractors should be aware of the goals of Storm Water Pollution Prevention (SWPP) program. In order to ensure storm water pollution prevention, BP Whiting has developed a SWPP Team for the purpose of developing and implementing all phases of the SWPP program.

The following sections describe the members, responsibilities, and objectives of the SWPP program.

2.1 SWPP Team

Table 1 List of SWPP Team and Responsibilities

| Title | Department | SWPP Responsibility |
|---|------------------------|---------------------|
| Environmental Manager | Environmental | SWPP Team Chair |
| Water/Waste Team Lead | Environment | SWPP Manager I |
| Environmental Specialist, Storm Water Program | Environmental | SWPP Manager II |
| OMD Complex Operations Superintendent | OMD | OMD Supervisor |
| OMD Compliance Assurance Specialist | OMD | OMD Compliance |
| OMD Maintenance Supervisor | OMD | OMD Compliance |
| Remediation Project Manager | Remediation Management | SWPP Assistance |
| Environmental Technician | Environmental | SWPP Assistance |
| Storm Water Inspector | Contractor | SWPP Inspector |
| Environmental Specialist, NPDES Program | Environmental | SWPP Assistance |
| Environmental Specialist, Waste Program | Environmental | SWPP Assistance |
| Area Environmental Specialist, OMD | Environmental | SWPP Assistance |



2.2 SWPP Team Responsibilities

The SWPP Team as a whole is responsible for developing, implementing, maintaining, and revising the SWPPP. The activities and responsibilities of the SWPP Team cover all aspects of the facility's SWPP program and each member should be accountable. The SWPP Team of managers and supervisors assist the SWPP Chair in implementing this plan. The SWPP Managers are responsible for taking the lead in the implementation and maintenance of this plan and reporting to the Chair as needed. Each additional SWPP Team member is accountable for their individual area of responsibility.

The SWPP Team is responsible for the following:

- Implementing all SWPPP requirements;
- Defining goals and objectives for the facility's SWPP Program;
- Identifying changes in facility operations and determining if modifications are needed to the SWPPP;
- Overseeing routine material inventory and recommending procedures to reduce or eliminate hazardous materials and waste;
- Identifying potential pollutant sources and recommending procedures to alleviate problems through changes in operations, equipment layout, and materials;
- Implementing and overseeing employee training and the inspection program;
- Coordinating the implementation of BMPs, reviewing the effectiveness of the program, and updating the program as needed; and
- Reporting the results and addressing problems encountered to appropriate personnel.

The SWPP Team meets annually for SWPPP implementation review. The team discusses the goals of the SWPPP, evaluate BMPs, address comments and suggestions received from others, and determine if changes should be made to the SWPPP. The team recommends revisions to the SWPPP and the implementation schedule as necessary. If BP personnel identify potential sources of pollutants or have ideas to reduce storm water pollution, these ideas are discussed with SWPP Team during these meetings.

2.2.1 SWPP Team Chair

The Chair is responsible for keeping informed about the current implementation status of the SWPPP and taking ultimate responsibility for ensuring that activity conducted at the BP Whiting Refinery minimizes the potential degradation of storm water quality.

2.2.2 SWPP Managers

The Managers are responsible for development, implementation, and revisions to this SWPPP and keeping the Chair informed of pertinent issues and plan status. Managers are split into Manager I and Manager II, where the former has a supervisory and quality assurance role and the latter has active responsibility for plan implementation.

Manager I has the following responsibilities:



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

- Ensures the SWPP Team meets at least annually to discuss issues pertinent to the prevention of storm water pollution. This includes an annual evaluation of the SWPPP to determine its effectiveness.
- Ensures that BP Whiting complies with the NPDES permit stormwater requirements.
- Negotiates budget need for construction and implementation of any require BMPs identified in this plan or in future revisions.
- Reviews suggested management plans for incorporation to SWPPP.
- Advises the SWPP Team on matters of policy and financial commitments.

Manager II has the following responsibilities:

- Oversees the implementation of the SWPPP requirements.
- Provides a report in any format deemed appropriate by the Chair as needed.
- Coordinates with the SWPP Team and other necessary personnel to identify all storm water monitoring points and ensures any sampling and visual inspection of storm water outfalls identified in the permit is conducted as required.
- Maintains a master record of all documents pertaining to the SWPP Program.
- Develops or ensures the design of storm water management guidelines or plans for construction activity or other activities which affect storm water at the facility.

2.2.3 Other SWPP Team Members

Other SWPP Team members have the following responsibilities:

- Attend and participate on SWPP Team meetings.
- Implement all aspects of the SWPPP that directly affect their operations. This task includes ensuring that all structural BMPs are functioning properly and are adequately maintained. In addition, each representative shall be responsible for ensuring that new and existing employees receive the proper SWPPP training through computer based training in Virtual Training Assistant (VTA).
- Inform the Manager of any new activity that may have a significant effect on the quality of storm water. These activities may include construction that disturbs soil, storage of material in an area inadequately served by storm water controls, or the initiation of an activity that may cause a discharge to the storm water system. When possible, Supervisors take steps that may not be identified by this plan to minimize any adverse activity.
- Assist the Managers with implementation of this SWPP Program.
- Identify any operations not in accordance with the SWPPP and report them to Manager II.
- Make suggestions for improvement to the current SWPP Program.



3.0 J&L AND LAKE GEORGE SITE DESCRIPTIONS

In accordance with the Permit, this SWPPP is required to address storm water discharging through Outfalls 003 and 004. The SWPPP is not required to address storm water discharges that are routed to treatment and then discharged through Outfall 005. Therefore, this document addresses only Outfalls 003 and 004. J&L and Lake George are the only areas of the facility that currently discharge storm water to Outfalls 003 and 004. Figures 1 and 2 depict these areas as Area 8 and 9.

This section provides a general description of this portion of the facility and the associated industrial activities that discharges storm water through Outfalls 003 and 004. It also discusses the facility drainage and the associated storm water collection and conveyance system to Outfalls 003 and 004.

3.1 Site Location

The area called J&L is located almost entirely in the city of Hammond, with a small portion in the northwest corner located in East Chicago, Indiana. The property is situated between 129th Street (north), CSX Railroad right of way (east), the Indiana Harbor Ship Canal (south), and Calumet Avenue (west). The general site layout is shown in Figures 1, 2, 5 and 6 as Areas 8 and 9.

Lake George area is located south of Calumet Avenue and east of 129th, as shown as Area 8 in Figures 1 and 6.

3.2 Soil Condition

The J&L and Lake George Area soil types and distribution are presented in Figures 3 and 4. The industrial history of the area has resulted in soils that are almost entirely slag fill, classified as urban in the SSURGO Database. Some drained Adrian muck is present along with small areas of marsh.

3.3 Land Cover

Referring to Figure 6, it is evident that approximately 15% to 20% of the J&L and Lake George areas consist of impervious refinery structures like piping, tanks, mobile office trailers and roadways. Natural vegetation occurs in a large section of the J&L (Areas 9) and Lake George (Area 8) and intermittent landscaped vegetation exists around streets and some buildings. As a result, drainage areas routed to Outfalls 003 and 004 are mainly vegetated. J&L Area 10 is a heavily vegetated isolated area located south of the Indiana Harbor Ship Canal (IHSC). It has less than 7% impervious surfaces and does not discharge through Outfalls 003 or 004. Figure 6 also indicates the amount of impervious surface area present throughout the property, which is discussed further in Section 4 of this SWPPP.

3.4 Storm Water Drainage and Outfall Descriptions

Storm water from the J&L Area has several drainage options as shown in Figure 5. Runoff can be retained in tank dikes for infiltration and evaporation or removal via vacuum trucks or manual pumping to the refinery's combined storm water/process sewer system if oil sheen is present. Storm water outside of the tank dikes is either collected in low lying areas for infiltration, moves to the west ditch and into the Turning Basin through Outfall 003, or moves to the east ditch to the Indian Harbor Ship Canal through Outfall 004. Outfalls 003 and 004 are fed by vegetated drainage ditches controlled by sluice gates and have automated flow meters



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

installed. Additionally, a limited amount of storm water enters directly into the Indiana Harbor Ship Canal from the south end of the highlands during heavy runoff events in the form of sheet flow.

On the west side of J&L Tank Field a small amount of runoff enters the Calumet Avenue Drain which drains to the Indiana Harbor Ship Canal.

There is an existing storm water inlet at the southwest portion of the Lake George Tank Field (west of Lake George Laydown) which can route water under Cline Avenue to the J&L Area west ditch.

Outfalls 003 and 004 discharge storm water runoff from the southwest quadrant of the refinery, from the areas known as the J&L Site and Lake George Tank Field. The area identified West Ditch Drainage Basin discharges storm water through Outfall 003 to the Indiana Harbor Ship Canal located south of the Outfall. The area identified as (East Ditch Drainage Basin discharges storm water through Outfall 004 to the Indiana Harbor Ship Canal. The west ditch (to Outfall 003) and the east ditch (to Outfall 004) are oriented from north to south on either side of the J&L Site. Storm water from a limited area of Lake George Tank Field and Cal-A Warehouse area discharges via an underground pipe beneath Cline Avenue to the J&L Site West Ditch, which directs the flow to Outfall 003. Outfalls 003 and 004 are controlled by manually operated sluice gates. These outfalls are inspected daily for any water quality concerns to prevent problematic discharge. The outfalls are opened only after inspection and allowed to discharge if the discharge is within compliance limits. Normal work week is defined as Monday through Sunday and sampling usually occurs on Monday morning when the gate may be opened on the first day of the week.

3.5 Storm Water Control Features

As indicated in the previous section, Outfalls 003 and 004 are controlled by manually operated sluice gates. These are closed when water quality issues prevent discharge. During low flows, this presents little problem as there is sufficient storage space within the ditches. During larger rainfall events, ditch volumes can be exceeded and localized flooding is possible. In 1994, rock check dams, sluice gates, and a detention pond were constructed to control large runoff events to Outfalls 003 and 004. These structures are part of an Agreed Order. Long term expansion projects are being evaluated to minimize any flooding in this area. At the Marine Docks, BP has two boxes of 250 ft booms in case of emergency that can be deployed in the ship canal as needed to contain any unwanted discharges out Outfalls 003 or 004. BP routinely maintains booms at the discharge of Outfall 004 to prevent tramp oil and other canal debris from accumulation in the outfall culvert area.



4.0 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES SPECIFIC TO J&L TANK FIELD OUTFALLS 003 and 004

This section describes the J&L and Lake George areas in order to specifically address the requirements of Part I.D.2.b.(4) of the Permit.

4.1 Industrial Activities

The J&L area is located south of Cline Avenue and east of Calumet Avenue and is separated into two distinct areas (Figure 5). Lake George area is located south of 129th Street and east of Calumet Avenue (Figures 1 and 6). The northern section of Lake George Tank Field and J&L Tank Field is a tank farm whereas the southern section is a multiuse area that is undeveloped and used for material laydown and storage. Lake George area tank field also has paved areas for mobile office trailers and parking and includes routing of storm water from the Calumet Avenue warehouse area.

Potential types and quantity of Materials present:

- Gasoline and gasoline products, distillate, and crude oil.
- Lay down areas for the storage of equipment and empty frac tank containers
- Actively managed areas of excess soil, rock, gravel and sand may be stored until they can be re-used within the refinery.
- A limited number of roll-off boxes and containers for non-hazardous waste

No drum chemical storage or hazardous material storage areas are present.

Method of Storage

- Diked tanks are used for gasoline and gasoline products, distillate, and crude oil
- Silt fences, "Jersey" barriers and tank dikes are used for excess soil, rock, gravel and sand material storage areas.

Remedial Actions

BP has an Agreed order in place to prevent migration of ground water contamination. Specific areas have well-point ground water systems which are routed to the BP Lakefront Wastewater Treatment Plant. Historically, the J&L Highlands area was used as an industrial waste landfill. This area is no longer in use and has been reclaimed by vegetation. As mentioned previously, the J&L area contains contaminated groundwater that is under remediation. Even though significant remedial steps have been taken in accordance with the agreed order, the water table is extremely shallow and there is some possibility for surface water contamination and subsequent movement off-site. Operational controls and remediation activities minimize this risk. Historical releases are identified on Table 3 in section 4.4.



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013

Document Revision Date: 11/12/2013

Document Revision #: 5

There is minimal risk of potential stormwater expose from chemical and materials based on secondary containment, container management and BMPs. .

Impervious surface area estimates of the entire J&L and Lake George areas are shown in Table 2. The following sections discuss the industrial activities associated with these areas.

Table 2 Impervious Surface Area

| Refinery Area Name | Refinery Area Number | Total Area (ft ²) | Impervious Area (%) |
|--------------------|----------------------|-------------------------------|---------------------|
| Lake George TF | 8 | 1,510,950 | 23 |
| J&L TF | 9 | 2,483,878 | 15 |
| J&L TF | 10 | 369,396 | 8 |

4.1.1 J&L Tank Field Northern Section

Storm water Basin 1 in Figures 2 and 5 represents the northern section of the J&L area and consists of 21 diked tanks used for the storage of gasoline and gasoline products, distillate, and crude oil. The west half of this area stores the crude oil in the six larger tanks and just to the southeast is the crude oil pump manifold where water can enter the combined storm water/process sewer system. The eastern half of the area is the shipping field used to store, blend, and ship finished products to various third party and BP owned pipelines. The shipping transfer manifold, called White Oak Station, is located between tanks 3912 and 3905 and is contained within its own dike. Water from both diked tank areas drains to the western tank dikes where it can be pumped over the dike to the west drainage ditch, if necessary. Functional transfer lines and pumps are located just south of tank 3913 and east of 3915. These lines are used for pumping down tanks and for inter-field transfers. An abandoned rail and truck loading rack is still present; however, neither trucks nor rail cars are loaded in the J&L area. The control room and asphalt parking lot is located at the east end of this northern section. This asphalt parking lot was expanded in 2010 with a new gravel parking area to the west of the Control Room. Storm water is contained within the dikes where it can either evaporate, or infiltrate. In the case of a high intensity storm event with a lot of accumulation, clean storm water may be pumped over the west dikes to the west drainage ditch and it is discharged through Outfall 003. The combined storm water/process sewer system is not directly linked to the diked tank areas in this section. .

4.1.2 J&L Tank Field Southern Section

The J&L Tank Field Southern Section (Storm water basins 2 through 8) is a heavily vegetated, undeveloped multiuse area. The northeastern area, just below the shipping field (Basin 2), is the Liquefied Petroleum Gas (LPG) Facility cavern and an abandoned rail shipping rack. The rail and truck loading lines are still present, but no longer in use. There is no potential for LPG contamination from the cavern or shipping area as the area shipping manifold was properly drained and isolated when decommissioned. Water can enter the combined storm water/process sewer system at the LPG cavern. At the central Eastern J&L boundary is the Cal Nitro Sphere Area (in Basin 6). It consists of seven diked spheres containing butane. Storm water collected within these dikes evaporates or infiltrates. To the north of the dikes is a gravel laydown area used for storage. South of the crude oil storage is the fire training field (Basin 5) which has two fuel storage tanks. Occasionally, the fire training field perform purges, tests, or training in which large amounts of clean water are discharged to the area around the training field. Most of the water settles in natural depressions for infiltration or moves

This document is considered uncontrolled once printed. The controlled version is located at: K:\HSE\Environmental\Written Procedures\2000\

This document was last printed on: 11/12/2013 9:30 AM

Page 12 of 53

Uncontrolled Document. Valid Only at Time of Printing/Download: 02/21/2014

Document ID WBU-DENV-4J01-45606



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

through the network of conveyances to the east or west ditch where it has usually been retained or infiltrated before the outfalls. Some fire water drains to a sump from which it is pumped to the combined storm water/process sewer system. Specifics on training/flushing operations are discussed in Section 5.4. The fire department also keeps two diesel storage tanks south of the Cal Nitro Sphere Area, on the north bank of the canal, for use with the emergency fire water pump. In 2009, the North Gateway gravel laydown area was constructed within Basin 3 to use for storage. The laydown area was designed to retain all runoff within the area so that additional pollutant loading would not be experienced at the outfall. In 2010, a gate was installed for North Gateway traffic access from Calumet Avenue. This gate receives very limited traffic arrivals and is not intended for exiting traffic use. In 2010, the J&L Highlands gravel laydown area was constructed to be used for storage in Basins 4 and 5 and also drains to Basins 7 and 8. The J-141 pump house is located at the southern end of Basin 5 along with an associated small laydown area. The rest of the area is vegetated except for a few interlinking dirt roads that allow access to the area.

4.1.3 Lake George Area

Lake George area is used for the storage of gasoline and gasoline-blend stocks, dirty gas oil (DGO), and xylene/toluene. Stored DGO material is also dewatered and injected into the pipe stills using three pump manifolds in this area. At the southeast corner, there is a fueling station for refinery vehicles. Just to the west of the fueling station vacuum trucks and associated hoses are stored. There is potential for small spills from the trucks and equipment to grade. A small metals storage and fabrication shop is located to the south of the tank field and a temporary equipment laydown area is located at the west.

The Cal-A storehouse is located at the northwest corner of Lake George Tank field with entrance to 129th St. This is the main shipping and receiving facility for refinery operations. When possible, materials are shipped directly to the refinery area of use, but often they arrive at the storehouse and are stored inside the building until they can be transported to the appropriate area for use. Occasionally, hazardous materials arrive at Cal-A and are temporarily stored on the covered loading dock until paperwork can be processed. Hazardous materials are not stored inside the storehouse. There is a small above ground gasoline storage tank for small machinery use located on the south side of the warehouse. Storm water runoff flows as sheet flow to the east where it enters a drainage ditch and two detention ponds, one of which is lined to prevent contamination with the subsurface hydrocarbon plume. There it infiltrates, evaporates or is pumped east to the open, naturally vegetated area through an automated pumping system.

To the east of the Cal-A Storehouse and southwest of Lake George Tank Field is a mobile office trailer complex and associated parking lot for general use. This area has potential for pollutants associated with heavy vehicle traffic such as oil and grease, sediments and engine fluids.

The area between the trailer complex and the vacuum truck storage is used as gravel laydown. This area is surrounded by berms and storm water runoff mostly evaporates or infiltrates. There is the potential for pollutants of sediment from fine gravel and pollutants associated with truck traffic, rust, oil and grease.

There is an existing storm water inlet at the southwest portion of the Lake George Tank Field (west of Lake George Laydown) which can route water under Cline Avenue to the J&L Area west ditch; however, this inlet rarely receives storm water. It is the current practice to normally pump stormwater from the Lake George area to the Lakefront WWTP.



4.2 Non-Tank Dike Storm Water Drainage Conveyance System

Excluding the tank dikes within the area (Basin 1), the J&L storm water conveyance system consists mainly of vegetated drainage ditches. In 1994, soil erosion control measures, such as sediment traps and diversion dikes, were put into place with guidance from the Indiana Soil Conservation Service and submitted to Indiana Department of Environmental Management (IDEM). The following is a summary of the storm water conveyance system as it applies to Basins 2 through 8 within the J&L area as indicated in Figure 5.

4.2.1 J&L Basin 2

Storm water from this area infiltrates or evaporates from a few vegetated depression areas and does not discharge to surface water. The area is mostly vegetated except around the control room.

4.2.2 J&L Basin 3

Storm water from this area remains almost entirely onsite due to the construction of the Calumet Avenue beautification berm and the lack of elevation change in the area. The graveled North Gateway laydown area was constructed and designed to retain runoff onsite. The area is surrounded by berms and a general southern runoff flow collects water in depression areas for evaporation/infiltration. Excessive runoff flows over the road and into the west drainage ditch where it discharges out Outfall 003. Potential pollutants are sediment from fine gravel and pollutants associated with truck traffic like rubber, rust, oil and grease.

4.2.3 J&L Basin 4

J&L Basin 4, also referred to as the west detention area, was installed on the west side of the J&L Highlands to receive storm water runoff. The basin was lined with clay to prevent interaction with groundwater. It was also planted with grass and some trees. There is an outlet that feeds into an underground conduit, through a sluice gate and into the west ditch. A large rock was installed in the basin to act as permanent sediment trap.

Storm water from J&L Basin 4 drains into the west ditch. The west ditch is contained within this basin and lined to prevent interaction with groundwater. There are two sheet pile weirs in the ditch to catch oil and debris and to help maintain a set water level in order to maximize the ditch's storage potential and eliminate groundwater flow. There is another sheet pile weir in the northern section of the west ditch, north of the tank dikes.

A French drain system was installed beneath the west ditch to maintain the groundwater elevation beneath the west ditch to prevent groundwater interaction with storm water. The drain has a total of approximately 1,400 feet in length and has sumps at both, the north and south ends, with the capability to route groundwater to the Lakefront WWTP.

The graveled J&L Highlands laydown area was recently constructed and partially drains to the basin, increasing potential pollutants of sediment from fine gravel and pollutant associated with truck traffic and laydown like rubber, rust, oil and grease. This laydown is only partially graveled, leaving large amounts of natural vegetation, resulting in infiltration and reducing runoff and pollutant.

Runoff from the highland areas is diverted through rock check dams, diversion channels, sediment control features, and a clay lined detention basin with a valve outlet structure. In 2010 with the laydown area construction, the three check dams and detention basin underwent maintenance/improvement to increase



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

runoff control and are fully functional. Information on storm water control features are found in Section 3.5 of this SWPPP and Figure 5. Additional spill response information can be found in the refinery SPCC Plan.

4.2.4 J&L Basin 5

Storm water from the J&L Basin 5 drains into the east ditch and includes a large portion of the highlands, the fire training field, and the LPG Facility. This basin contains a series of drainage channels to collect runoff and route it to the east ditch. Water is routed to the north end of the ditch.

The J&L Highlands laydown area partially drains off the highlands to the east ditch and is mostly vegetated aiding in the prevention of potential pollutants of sediment from fine gravel and pollutant associated with truck traffic like rubber, rust, oil and grease. The J-141 pump house with small laydown area is located in southern Basin 5 and upstream of the valve at Outfall 004, there is a pipe installed in the east ditch that is attached to the J-141 wellpoint system. This is a contingency system that is capable of pumping storm water out of the east ditch to the Lakefront Wastewater Treatment Plant (WWTP) if needed to prevent non compliant storm water from discharging through Outfall 004. The J-141 well point system is managed by BP Remediation Management and this contingency measure is implemented in the event of storm water contamination.

A diversion dike along the upper crest was installed for diversion of water coming off of the highlands to the west through the channel and into the west detention area. Additionally, four rock check dams were installed to slow velocities and retain sediment. The diversion dike concentrates the flows through a channel with rock check dams that dissipate energy and erosion potential.

4.2.5 J&L Basin 6

Storm water from this area infiltrates or evaporates from the storage areas around the butane spheres and does not discharge to surface water. The area is mostly heavy vegetation, although there is a gravel laydown area north of the spheres which is surrounded by berms and mostly infiltrates or evaporates. Potential pollutants include sediment from fine gravel and pollutants associated with truck traffic like rubber, rust, oil and grease. There is a firewater pump house located at the canal for emergency use.

4.2.6 J&L Basin 7

This area is characterized by large changes in elevation, resulting in rapidly moving sheet flow during storm events. A gravel filled trench and berm system was constructed to route the water to the Basin 4 retention pond and eventually to Outfall 003. This trench was installed in 1995 on the east side of the Turning Basin to intercept reddish-colored stained groundwater. It is a 6 foot trench below the ground surface and backfilled with limestone to oxidize the metal contaminated groundwater before it reaches the Turning Basin. J&L Basin 7 basin receives runoff from a small graveled portion of the J&L Highland laydown.

4.2.7 J&L Basin 8

Within this area, storm water drains into a small depression on the north side of the canal land bridge. A berm was constructed to enlarge the depression area. It is designed to contain a 25 year/24 hour rainfall event and keep all runoff generated from this area from leaving Basin 8. This basin also receives runoff from a very small graveled portion of the J&L Highland laydown area.

Within this area, oil sheen was at times historically observed along the canal banks near Outfall 004 after agitation of the soils along the banks. Historical contamination from former industrial facilities located along

This document is considered uncontrolled once printed. The controlled version is located at: K:\HSE\Environmental\Written Procedures\2000\

This document was last printed on: 11/12/2013 9:30 AM

Page 15 of 53

Uncontrolled Document. Valid Only at Time of Printing/Download: 02/21/2014

Document ID WBU-DENV-4J01-45606



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision # 5

the Indiana Harbor Ship Canal cause tramp oil to accumulate along the banks including the Outfall 004 area. This is a known situation and canal remediation is ongoing.¹ Furthermore, routine weekly sampling and daily visual observations of stormwater discharged through Outfall 004 corroborate that the presence of oil sheen is not related to any activities of the refinery. Booms are routinely in place at Outfall 004 to separate BP's stormwater discharge from the potential floating contaminants in the canal.

4.2.8 J&L Basin 9

This area is heavily vegetated. It includes Lake Mary to the east and marshland to the west. The central area contains the former Cat Pond and limestone storage depression areas, which retain most storm water runoff.

4.3 Approved Non-Storm Water Discharges

Non-storm water discharges within the J&L and Lake George areas may include the following and be discharged to Outfalls 003 and 004:

- Fire training or system flushing;
- Potable water sources including waterline flushing;
- Uncontaminated ground water;
- Routine exterior building wash down which does not use detergents or other compounds;
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used;
- Air conditioning condensate; and
- Equipment hydrotesting using fire water.

Specific fire training activities include health, safety, security, and environment (HSSE) training and fire brigade training at the J&L training area, and fire hydrant flushing. HSSE training occurs from June to October, four days per week, with a flow rate of approximately 125 gallons per minute (gpm). Fire brigade training sessions occur once in May, June, and July and use approximately 60,000 gallons per session. As described in Section 4.1.2, this water is retained by natural depressions, infiltrates to ground water, or a small amount drains to a sump pump east of Tank 3915 where it goes to the combined storm water/process sewer.

Additionally, the J&L and Lake George area is covered by an Agreed Order for investigation and remediation with IDEM as described in Section 5.7. Multiple well point systems are in operation for ground water remediation.

Detergent or solvent-based washing of equipment or vehicles that would allow wash water to enter any storm water drainage system shall not be allowed at this area unless appropriately permitted under this NPDES permit.

¹ Reference document acknowledging the canal contamination and ongoing remediation: Natural Resource Damage Settlement for the Indiana Harbor Canal and the Grand Calumet River.



Document Number: E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision #: 5

Investigation into any illicit discharges in the J&L Area to Outfalls 003 and 004 included visual perimeter inspection, inspection of the storm water conveyance system, knowledge from the current operation of the system, and routine monitoring as required by the NPDES permit.

4.4 Past Spills and Leaks

Refer to Table 3 for a list of the past CERCLA reportable spills and leaks that have occurred in the area over the past 3 years prior to the effective date of the Permit (i.e., from 2/09 to 2/12). All spills were cleaned up and waste was disposed of in accordance with the applicable RCRA and/or IDEM solid waste management requirements.

The proper remediation actions were taken following each spill according to the SPCC Plan which involves containing the spill with sand, bags, or booms; contacting the appropriate personnel and response teams; and properly cleaning the spill to restore the area to its previous state. BP Whiting Refinery takes each spill very seriously and ensures that areas are remediated appropriately.

Table 3 CERCLA Reportable Past Spills and Leaks for Period from 2/09 to 2/12 (i.e., 3 years from effective date of the NPDES permit)^a

| Date | Unit | Complex | Incident | Spill (bbl) |
|----------|---------------|----------------|--|---|
| 1/4/2010 | Oil Movements | Outfall #4 | NPDES Exceedance at Outfall #4 (pH=9.3) (INC-7852) | Exceedance of pH at Outfall #4 |
| 8/3/2010 | Oil Movements | J&L Tank Field | Sump Overflow, Tank 3908 (INC-8471) | Approx. 350 bbls of ULSD2 (heating oil) |

All spills were cleaned up and waste was disposed of in accordance with the applicable RCRA and/or IDEM solid waste management requirements.

4.5 Assessment Summary

Relatively few pollution potential areas of concern exist in the J&L and Lake George areas. A complete listing of the tank inventory including the type of material stored, quantity, and corresponding toxicity information can be found on the BP Whiting intranet in the MSDS at <http://whiting.bpweb.bp.com/HSE/MSDS/> and the SPCC Plan at <http://whiting.bpweb.bp.com/Emergency> Based on the 2012 reporting year for BP's SARA 311/312 reports, Table 4 provides an estimate of the chemicals/materials stored in the Lake George and J&L Tank Fields that could potentially impact stormwater if not adequately contained. The table includes an estimate of the annual average and daily maximums.



Table 4 Types of Materials that could impact Stormwater Lake George and J&L Tank Fields

| Materials | Annual Average (lbs) | Daily Max (lbs) |
|------------------|----------------------|-----------------|
| Butane | 1,900,000 | 4,100,000 |
| Crude | 297,800,000 | 515,600,000 |
| Diesel | 27,500,000 | 86,900,000 |
| Gas Oil | 21,800,000 | 41,800,000 |
| Gasoline | 28,300,000 | 123,100,000 |
| Jet Fuel | 18,400,000 | 42,700,000 |
| Ultraformer Feed | 3,600,000 | 23,500,000 |
| Xylene | 30,400,000 | 31,500,000 |

The storage areas are all equipped with secondary containment and the risk of a storage tank failing is very low. Therefore, the likelihood of exposure of material to stormwater is very low. Equipment is constantly maintained to prevent leaks and so the risk of pollution from pipes and valves is probably the greatest in the tank dike areas, but still relatively low. Figure 5 shows the drainage pathways to Outfalls 003 and 004. A concern is the groundwater contamination with surface water runoff. Following an agreed order, BP has installed a remediation well point system to keep the contamination from spreading and begin remediation. Figure 7 indicates the location of the well point systems that are pumped to the Lakefront WWTP. The plume is very shallow which may present a problem with possible surface water contamination. As a result, the detention pond located in Area 4 has a clay liner.

Tank dike drainage and infiltration do not occur at rapid rates. This can cause water to pond and be present for extended periods of time, causing unwanted vegetation growth. Storm water in the tank dikes has the possibility to become contaminated with sediment, gasoline and gasoline products, distillate, and crude oil or atmospheric deposition along with rust like substance that develops in many of the dikes. There is a stormwater management policy in place which is implemented when water must be pumped out of the tank dikes before discharge through Outfalls 003 or 004. The current J&L non-tank dike drainage system consisting of the east and west ditches have routine scheduled maintenance to remove vegetation within the ditches. The rock check dams and berms coming off of the highlands are also inspected and maintained. The storm water operating procedures are reviewed for proper implementation and evaluated under the annual compliance evaluation.

4.6 Management of Storm Water under Agreed Order

In 1995, Amoco Oil Company Whiting Refinery voluntarily entered into an agreed order, Cause Number H-11187, with the Indiana Department of Environmental Management. This order was for the mutual purpose of mitigating any threat to human health and the environment, to perform a Resource Conservation and Recovery Act (RCRA) Facility Investigation, and perform a Corrective Measures study to identify and evaluate alternatives for the corrective action necessary to prevent or mitigate any migration of releases of hazardous waste. This order includes a work plan for the J&L site. This work plan identified 27 pits that were generally cleaned up in 1977 and interim measures were put in place to prevent and abate offsite migration of contaminants.



Document Number: E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date: 11/12/2013
Document Revision Date: 11/12/2013
Document Revision # 5

The work plan called for the construction, monitoring, and maintenance of multiple well point and drainage systems as shown in Figure 7. These systems include an extensive well point system, recovery pumps, oil/water separators, and sheet pile structure. Storm water control measures were also implemented described in Section 4.3, including rock check dams, diversion berms, and a lined retention basin. A monitoring program is in place as required by the order and complete records have been maintained for the duration of the J&L Site Agreement.

Document ID WBU-DENV-4J01-45606



5.0 STORM WATER BEST MANAGEMENT PRACTICES (BMPs)

According to the Indiana General Permit for Storm Water Discharges Exposed to Industrial Activity (Rule 6, 327 IAC 15-6) (General Permit), BMPs are the activities, prohibition of practices, maintenance procedures, and other management practices used to prevent or reduce the pollution of storm water discharge. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with the General Permit. The following describes the non-structural (preventative) and structural (treatment) BMPs utilized at the BP Whiting Refinery. Some of these measures were previously discussed in Sections 3.0 and 4.0 of this SWPPP.

These BMPs are designed to undergo an iterative process, subjecting their effectiveness to the Annual Comprehensive Evaluation. This process optimizes the storm water management practices at the J&L and Lake George areas.

5.1 Non-Structural BMPs

The following are prevention practices utilized by the facility to meet the objectives set forth in the Permit.

5.1.1 Good Housekeeping

Each operational unit has procedures in place to keep their respective areas clean and reduce the potential for pollutant sources to mix with storm water. Periodic inspections are made by operations and maintenance personnel of their areas of responsibility.

Both east and west ditches in J&L are maintained in order to preserve the integrity of the west ditch liner and to maximize the storm water storage volume that the ditches can handle. This improves the functionality of Outfalls 003 and 004. Sump pumps within the tank dikes are maintained and checked in order to assure that storm water, if contaminated, can be adequately isolated and pumped or evacuated to the combined sewer system and to the Lakefront WWTP.

5.1.2 Preventative Maintenance

The BP Whiting Refinery has a thorough and extensive preventative maintenance program. Operators perform routine inspections as part of their normal operating procedures. Any non-compliance is dealt with immediately. A systematic network of preventative maintenance procedures and inspection procedures are used by the inspection/maintenance personnel. The maintenance procedures are available on the refinery's intranet system. The maintenance records are documented in the SAP system and may include the inspections and testing of facility equipment/systems in areas with potential for SW exposure to pollutants; appropriate maintenance of such equipment/systems; and root cause failure reviews, when warranted, to uncover conditions that could cause breakdowns/failures resulting in discharges of pollutants.

Tanks, valves and pipe junctions are inspected on a regular basis within the J&L area for present or possible leaks. This reduces the chance of small hydrocarbon spills within the area from the pipes, which is the main threat of potential contamination.



5.1.3 Spill Response

Part I.D.2.c.(2) of the Permit requires a written spill response program, which is satisfied by both the BP Whiting Refinery Emergency Response Plan and the BP Whiting Refinery Spill Prevention, Control, and Countermeasures (SPCC) Plan. Both Plans are available via BP Whiting's intranet and in hard copy at specific locations.

5.1.4 Material Handling, Storage and Disposal

The existing BMPs that cover material handling and storage activities are contained in the Operation Procedures Documents for both OMD and Shipping and Receiving. The refinery has developed and maintains procedures for nearly all of the various activities involved in handling and storing of bulk liquid materials as well as other materials coming into the Cal-A receiving warehouse as described in section 4.1.3.

Within the J&L area, properly maintained dumpsters that have employed functional drain plugs are used for off-site disposal of municipal solid waste and co-mingled recyclables. Dike water that does not meet stormwater discharge criteria is routed, via the refinery's combined storm water/process sewer system to the refinery-owned and operated WWTP. All waste management and disposal is conducted in accordance with Federal, State and local regulations.

5.1.5 Residual Management & Recycling

The existing BMPs that concern waste handling and recycling are described in the refinery's environmental procedures. These procedures describe the BP Whiting Refinery's waste management philosophy, waste handling procedures, waste categories, container management, labeling procedures, recycling, documentation and other related topics. The procedures are maintained and located on the facility's Intranet Environmental Home page.

Maintenance of clean out from ditches is assessed for waste determination and disposed of properly. When removing natural vegetation, it is disposed in accordance with BP Waste Management Policies. This would include vegetation removed from the J&L ditches or low areas where contaminants are present in the soil around the roots or coating the vegetation. Sediment that is dredged from ditches, swales, or ponds is properly classified as special or hazardous waste.

5.1.6 Outfalls 003 and 004 Water Quality Sampling and Operation Procedures

In accordance with Part I.A.4 of the permit, Outfalls 003 and 004 must meet the discharge limits as described in Part I.A.4 and adhere to 327 IAC 2-1.5-8 as described in Part I.B of the Permit. Refinery personnel or representative are required to monitor and sample the first discharge of the week. If no discharge occurs during the week, no action is required. The monitoring procedures for Outfalls 003 and 004 can be found on the BP Whiting Environmental Homepage.

5.2 Existing Structural BMPs

Structural BMPs consist of structural devices that reduce or prevent pollutants in storm water discharges. The following describes some of the structural (treatment) BMPs utilized at the facility.



5.2.1 Sediment Transport and Site Stabilization

Permanent BMPs used at the facility to prevent soil erosion include covering soil surfaces with asphalt, concrete or gravel. Runoff is retained in pervious gravel areas for infiltration or routed along swales or drainage areas/ditches to Outfalls 003 and 004. Other pervious surfaces are used when possible to maximize infiltration. Earthen tank farm berms are covered with a permanent stabilization asphalt substance and landscaping is used along the perimeter of the area. Vegetated areas help to stabilize soil, helps filters sediments, and helps absorb water so that it does not run off the facility. Additionally, a sweeper truck visits various areas of the facility, as needed. When possible, porous pavement is used in future construction of parking lots, roads, and other areas of large surface cover instead of compacted gravel.

Temporary BMPs used at the facility to prevent soil erosion include the use of sandbags, crushed rock and silt fence. These BMPs are used where needed, and especially in areas that are undeveloped or in the process of being developed. Individual Construction SWPPPs are developed for any construction activities that disturb more than one acre. Specific BMPs are identified on a case by case basis.

5.2.2 Stock and Spoil Piles

Temporary soil, sand and other reusable materials such as crushed concrete stockpiles may be located in the J&L and Lake George areas. BP Whiting does not store piles of salt in the Lake George and J&L areas. In accordance with the Indiana Storm Water Manual, materials generated from construction projects are stockpiled in areas that do not interfere with other construction activities or in areas where they do not cause damage to adjoining properties, waterways, or water bodies.

On-going working piles, require the installation of sediment barrier measures along the down-slope side of all soil stockpiles/borrow areas prior to placement of the stockpiles or removal of any material from the area.

Unvegetated areas likely to be left inactive for fifteen (15) days or more are temporarily or permanently stabilized with measures appropriate for the season to minimize erosion potential. Alternative measures to site stabilization are acceptable if the project owner or their representative can demonstrate they have implemented erosion and sediment control measures adequate to prevent sediment discharge.

5.2.3 Storm Water Conveyance and Retention Areas

Current storm water conveyance and retention systems are described in detail in Sections 3.4 and 3.5. Outfall inspections are performed during the first discharge of the week. Any unusual conditions are identified and addressed immediately. The remediation wellpoint system is maintained in order to prevent any contaminant from mixing with storm water runoff and discharging to Outfall 003 or 004 and the IHSC.

5.2.4 Secondary Containment

All of the active aboveground storage tanks have secondary containment systems also referred to as tank dikes. Storm water accumulated in these tank dikes can either be drained to the combined storm water/process sewer system routed to the Lakefront WWTP or can be pumped out and routed to Outfalls 003 and 004. Storm water in these tank dikes is visually inspected for oil sheen and tested for pH prior to pumping to Outfalls 003 and 004. In the event oil sheen is observed or pH reading is outside of a range from 6 to 9, the storm water is sent to the Lakefront WWTP either via combined storm water/process sewer system or via vacuum trucks.



5.2.5 Treatment

The J&L and Lake George areas do not typically drain to the combined storm water/process sewer system routed to the Lakefront WWTP. In the J&L and Lake George areas, there are no interior maintenance area floor drains with potential for maintenance fluids or other materials to enter the combined storm water/process sewer system or sanitary sewer system. J&L and Lake George are the only drainage areas that contribute storm water to Outfalls 003 and 004. No treatment occurs in J&L and Lake George areas. Normal operation of Outfalls 003 and 004 meets the NPDES Permit discharge limits on a regular basis. When stormwater does not meet discharge permit requirements, stormwater can be transferred to the Lakefront WWTP.

5.3 Planned BMPs for Future Implementation

New BMPs are to be implemented in accordance with Part I.D of the permit. These may include the following improvements to the storm water pollution prevention measures currently in place.

5.3.1 J&L Capital Improvement for Outfalls 003 and 004

Structural improvements to the current J&L Area conveyance system are considered for future operation.

Non-structural improvements to the operation of the J&L and Lake George areas storm water conveyance system and Outfalls 003 and 004 are also under consideration.

A maintenance program for the J&L area has been established in conjunction with this SWPPP and includes quarterly inspections, ditch maintenance, valve operations, and runoff control structures.

5.4 BMP Lists

The following lists may be used in conjunction with the Annual Comprehensive Site Compliance Evaluation form in order to assess the functionality of the SWPPP and appropriateness of BMPs. Additional BMPs not on this list may also be implemented as deemed necessary. The below-referenced BMPs were assessed and deemed appropriate for preventing or reducing potential pollution from sources in the J&L and Lake George areas.

5.4.1 Non-Structural BMPs

- Storm water training for facility employees including:
 - Reduce tracking sediment off property or on refinery roads
 - Proper chemical management
 - SWPPP
 - SPCC Plan
- Storage areas have the following:
 - Secondary containment
 - Equipment properly stored off ground and covered as appropriate
 - Soil and material storage without silt fencing or other controls may be located in areas where there is no potential impact only with approval from Environmental.
 - Dormant piles and pile remnants shall be removed.
 - Soil and material storage areas shall be managed and an owner identified to the asset area superintendent.
- Properly maintained pipes and valves in tank fields



Document Number:

E2001

**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Review Date:
Document Revision Date:
Document Revision #

11/12/2013
11/12/2013
5

- Properly maintained storm water structures
 - Functioning properly
 - Residual materials are removed
 - Vegetation removed
- Housekeeping
 - Sweeping
 - Dust management
 - Organized Areas
 - Organized laydown areas
 - Spills properly cleaned up with no residual
 - Trash and garbage management

5.4.2 Structural BMPs

- Piles are properly stabilized
 - Temporary piles are not eroding from wind or water
 - Permanent piles are covered and/or surrounded with an impervious structure such as silt fencing on the down gradient side of the pile.
- Minimal areas of extensive, undesired ponding or flooding exist in areas with vehicle traffic
- Gravel shoulders of roads are in good condition with no pot holes
- Operations are occurring in the proper locations
- Remediation well-point system to minimize contaminated ground water from mixing with surface water
- Storm water management structures are functioning properly and with each other, if applicable
 - Detention basins
 - Weirs
 - Sluice gates & valves at outfalls
 - Rock check dams , diversion berms
 - Ditches are not overflowing



6.0 EMPLOYEE TRAINING PROGRAM

The facility has an established training program that instructs and informs its employees and contractors about various regulatory compliance issues. Spill Prevention, Emergency Response, SPCC program and Stormwater awareness are an integral part of this training. The following are some of the specific ways that the refinery management provides increased awareness of the prevention of non-storm water discharges and storm water discharge pollution.

6.1 Storm Water Specific Training

The following training items have been incorporated to the current BP Whiting employee training program:

An online SWPPP training module was added to the VTA program for initial and annual training of BP employees as specified below. In addition, all contractors and contract employees receive initial and annual refresher environmental training including requirements associated with stormwater pollution prevention. Training records are maintained by BP's Learning Center. Additionally, occasional "Lunch and Learn" refresher sessions are carried out to various groups to exchange experience and discuss lessons learned.

Topics for the general employee include:

- General explanation and importance of storm water and its affect on the environment and services
- Brief regulatory background and consequences of non-compliance
- The SWPPP
- Storm water control measures
- Role of storm water inspections
- Housekeeping principals and BMPs, including pile protection, and solids/sediments out of sewers.

Additional topics for the more detailed training specific to the SWPPP Team may include:

- More detailed regulatory background
- Permitting requirements
- The compliance process
- Highlighted sections of the SWPPP that identify action items of high importance to the team.



7.0 STORM WATER MONITORING PROGRAM AND INSPECTIONS

7.1 Storm Water Comprehensive Site Compliance Evaluation

The Permit requires that the facility performs a comprehensive site compliance evaluation (CSE) of areas discharging storm water to Outfalls 003 and 004 at least once per year. The purpose of the evaluation is to confirm the accuracy of the description of potential pollution sources contained in the SWPPP, determine the effectiveness of the SWPPP and assess compliance with the Permit. Each evaluation should include the following:

1. A complete inspection of all potential pollutant sources for evidence of pollutants entering the storm water conveyance system;
2. Structural storm water measures, sediment and erosion control measures, and other structural pollution prevention measures identified in Section 5.3 of the SWPPP (and any additional) shall be inspected to ensure that they are operating correctly;
3. An inspection of equipment including spill response kits;
4. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented, maintained, and documented in the SWPPP, or whether additional BMPs or documentation are necessary; and
5. Non-storm water/illicit discharge observations.

An evaluation report is written to document the results of the evaluation. The report documents the results of the records review and facility inspection and lists any instances of non-compliance and any necessary corrective actions, including but not limited to, revisions to the SWPPP. If the evaluation report does not identify any incidents of non-compliance, the report includes a certification that the facility is in compliance with the SWPPP and the Permit.

All observations and assessments are made using the Annual Comprehensive Site Compliance Evaluation form (Appendix A) or other equivalent form. The completed forms are kept as records in the refinery document control system Documentum to satisfy the inspection requirements (Points 1, 2, 3, and 5) of the CSE. These reports are then be used to create the written report (Point 4) to complete the CSE. All CSE documents are stored in Documentum and in the Environmental File Room for three (3) years after the date of evaluation.

In accordance with Parts I.D.2.b and c of the Permit, when warranted, based on the results of the comprehensive site compliance evaluation, the description of potential pollutant sources identified and pollution prevention measures and controls identified, the SWPPP is revised within four (4) weeks of the evaluation. Implementation of any change to the SWPPP is completed in a timely manner, but in no case more than twelve (12) weeks after the evaluation.

Note: The above-referenced 4 and 12 week timeline periods shall begin on the date the evaluation report is finalized and signed off by the reviewers. Additionally, as an internal guidance, the evaluation report should be finalized/signed off within six (6) weeks from the date of the physical field evaluation.

7.2 Storm Water Management Measures and Conveyance Inspections

At a minimum, quarterly inspections of the storm water management measures and storm water runoff conveyances are conducted. In accordance with Part I.D.2.d.(4), quarterly inspections are required only in

This document is considered uncontrolled once printed. The controlled version is located at: K:\HSE\Environmental\Written Procedures\2000\

This document was last printed on: 11/12/2013 9:30 AM

Page 26 of 53



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001

Document Review Date: 11/12/2013

Document Revision Date: 11/12/2013

Document Revision # 5

three quarters. The remaining quarterly inspection can be satisfied by the annual compliance evaluation. These inspections specifically address the east and west ditch of J&L and all structures and operating procedures related to Outfalls 003 and 004. These inspections are done visually and reported in the visual inspection checklist located in Appendix A. They are used as information for the CSE and identify any immediate storm water pollution concerns. Documentation from these inspections (i.e. the completed checklists) are maintained electronically in the Documentum data base for three (3) years.



8.0 REPORTING AND PLAN REVISIONS

8.1 Annual reporting

There are no annual reporting requirements for storm water discharges to be submitted to the agency. In accordance with Part 1D.2d(3) of the Permit, an annual site evaluation report is completed and maintained for BP Whiting internal reference as noted in Section 8.1. In addition, quarterly inspection records are completed and maintained as noted in Section 8.2.

8.1.1 Availability of Reports

The SWPPP is retained at the facility. It is available for review by a representative of the Commissioner of IDEM upon request.

8.2 Recordkeeping

Records for the SWPP Program are coordinated by the SWPPP Manager and maintained in Documentum. Records of monitoring activities (non-storm water observations, storm water discharge observations, and the annual site compliance evaluation form) are located in Documentum under file code: "4B02". These records are maintained for a period of three (3) years from the date of evaluation, report or application. Sampling data is stored in the Laboratory Information Management System (LIMS) system for a period of five (5) years.

8.3 Plan Revisions

This SWPPP is an active document and is amended whenever there is a change in design, construction, operation, or maintenance at the facility which may affect the discharge of storm water runoff from the site. If results of site observations and inspections reveal that violations of any conditions of the Permit (described in Section 1) or that measures or practices in the SWPPP have not achieved the general objectives of reducing pollutants in storm water discharges, the SWPPP should be amended to reflect the corrected deficiencies. If operations change, those portions of the SWPPP should be revised and revisions are kept in accordance with BP's Environmental Records Management System.

The SWPPP is also revised upon written notice by the Commissioner of IDEM if the SWPPP proves to be ineffective in controlling pollutants in storm water discharges exposed to industrial activity. Within 60 days of notification from the Commissioner, BP shall make the required changes to the SWPPP and shall submit the amended SWPPP to the Commissioner for review.



9.0 CERTIFICATION OF INFORMATION

The SWPPP required by the Permit shall be signed and certified by a person described below or by a duly authorized representative of that person:

1. For a corporation: by a responsible corporate officer defined as a president, secretary, treasurer, any vice-president of the corporation in charge of a principal business function, or any other person who performs similar policymaking or decision making functions for the corporation or the manager of one or more manufacturing, production or operating facilities employing more than two hundred fifty persons or having the gross annual sales or expenditures exceeding twenty-five million dollars (in second quarter 1980 dollars), if authority to sign documents has been assigned to the manager in accordance with corporate procedures; or
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively.

A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above.
2. The authorization specific either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position; and
3. The authorization is submitted to the Commissioner.



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number:

E2001

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

9.1 Certification

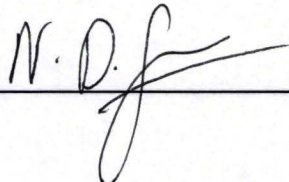
9.1.1 General

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

9.1.2 Storm Water and Non-storm Water Discharge Certification

I certify under penalty of law that the storm water discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-storm water contributions and that the facility is free of illicit storm water discharges and unpermitted non-storm water discharges to regulated storm water systems. Based upon my assessment of the industrial process in place in the J&L and Lake George areas and inquiry of the person or persons directly responsible for inspecting as described in Sections 4.4 and 7 of this SWPPP, this statement is true to the best of my knowledge and belief. A description of the method used, the date of any testing, and description of the on-site drainage points that were directly observed during the inspections or evaluations can be found in reports referenced in Sections 4.4 and 7. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

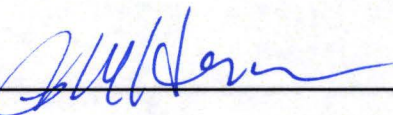
Name Nick Spencer Title Whiting Business Unit Leader

Signature  Date 21st Nov. 2013

9.2 Qualified Professional Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name Rosalie Herrera Title Env. Team Leader

Signature  Date 11/12/13

This document is considered uncontrolled once printed. The controlled version is located at: K:\HSE\Environmental\Written Procedures\2000\

This document was last printed on: 11/12/2013 9:30 AM

Page 30 of 53

Uncontrolled Document. Valid Only at Time of Printing/Download: 02/21/2014

Document ID WBU-DENV-4J01-45606



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001

Document Review Date: 11/12/2013

Document Revision Date: 11/12/2013

Document Revision # 5

10.0 REFERENCES

- BASCOR Environmental, Inc., 1997, "Surface/Storm water Runoff Study Amoco Whiting Refinery J & L Site", submitted to BP Whiting Refinery. Available on Documentum WBU-DENV-4K13-0038147.
- Indiana Department of Environmental Management, 1995, "Agreed Order, Cause Number H-11187", Indiana Department of Environmental Management. Available on Documentum WBU-DENV-5F01-0006008.
- SPCC Plan with Tank Inventory, Available on Whiting Intranet <http://whiting.bpweb.bp.com/Emergency>
- Materials Safety Data Sheets, Available on Whiting Intranet <http://whiting.bpweb.bp.com/HSE/MSDS/>
- Indiana Storm Water Quality Manual, <http://www.in.gov/idem/4899.htm>

Document ID WBU-DENV-4J01-45606



BP Whiting Business Unit
Environmental Management System Procedure Manual

Document Number:

E2001

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

11.0 REVISION HISTORY

| Revision Level | Change(s) | Author | Date |
|----------------|--|--------|----------|
| 0 | Initial Issue | rmh | 10/2008 |
| 1 | General update | vlm | 12/2010 |
| 2 | Updates from annual audit | br | 6/9/2011 |
| 3 | Updated to reflect area specific to stormwater Outfall 003 & 004. | rmh | 04//2012 |
| 4 | Update to ISO 14001 format, other edits and updates as needed during annual review | pjp | 07//2013 |
| 5 | Updated per SWPPP Team meeting | pjp | 11/12/13 |

Authored by:

Date: 10/10/08

Approved by:

Date: 12/5/08

Figures

Figure 1 Refinery Area Site Map Depicting Elevation, Facility Boundaries, and Receiving Waters

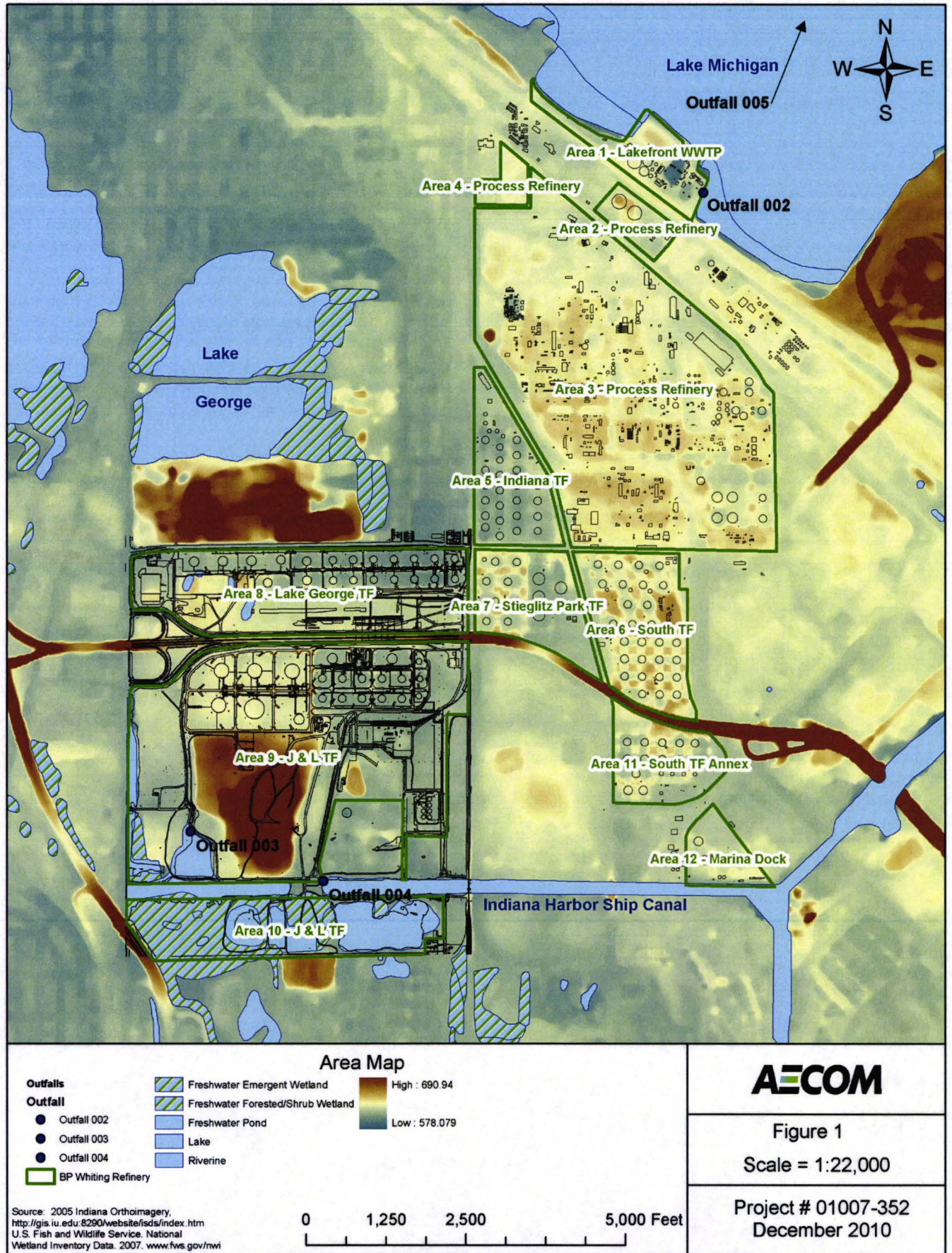
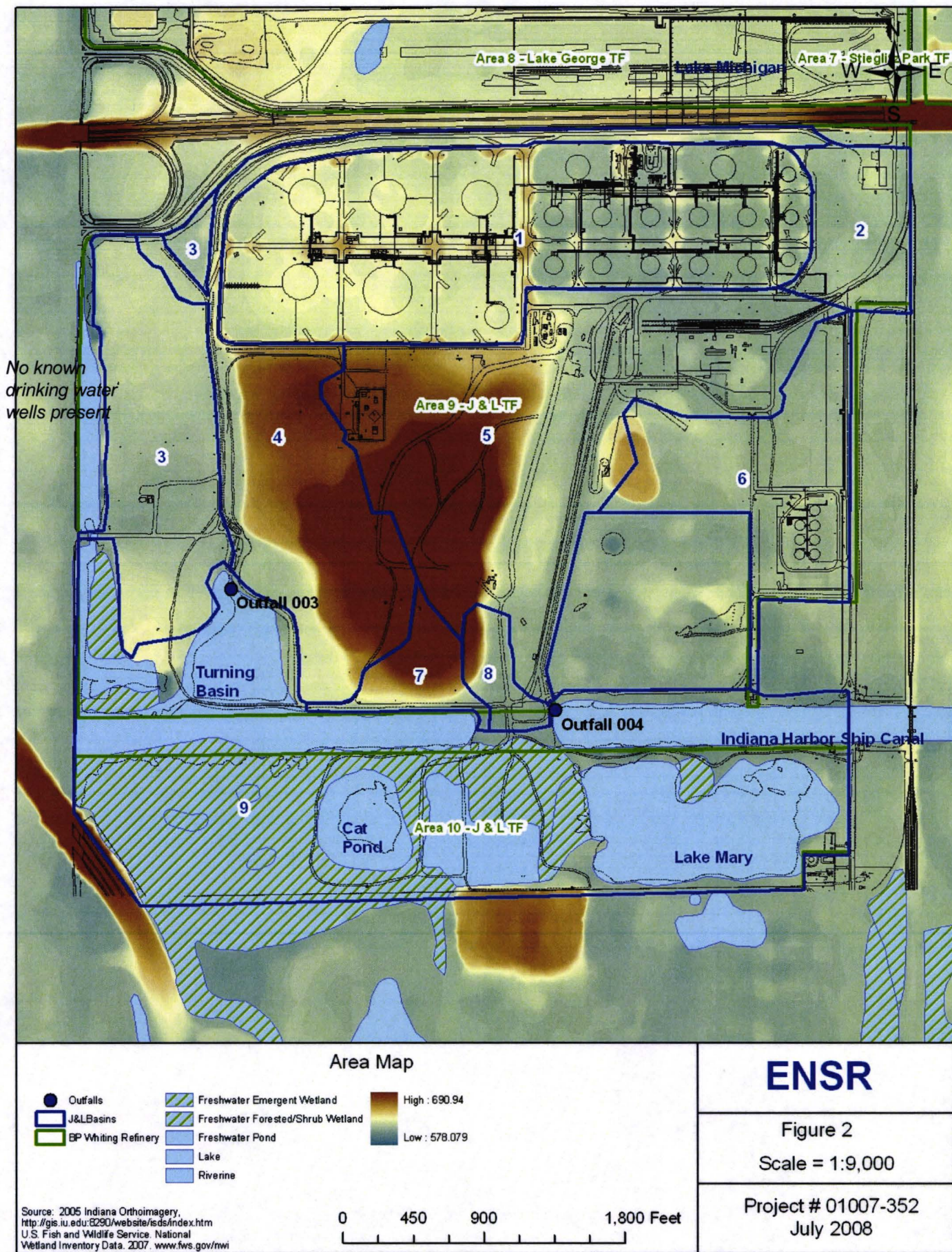


Figure 2 J&L Area Site Map Depicting Elevation, Boundaries, and Receiving Waters



Document ID WBU-DENV-4J01-45606

Figure 3 Refinery Soils and Topographic Map

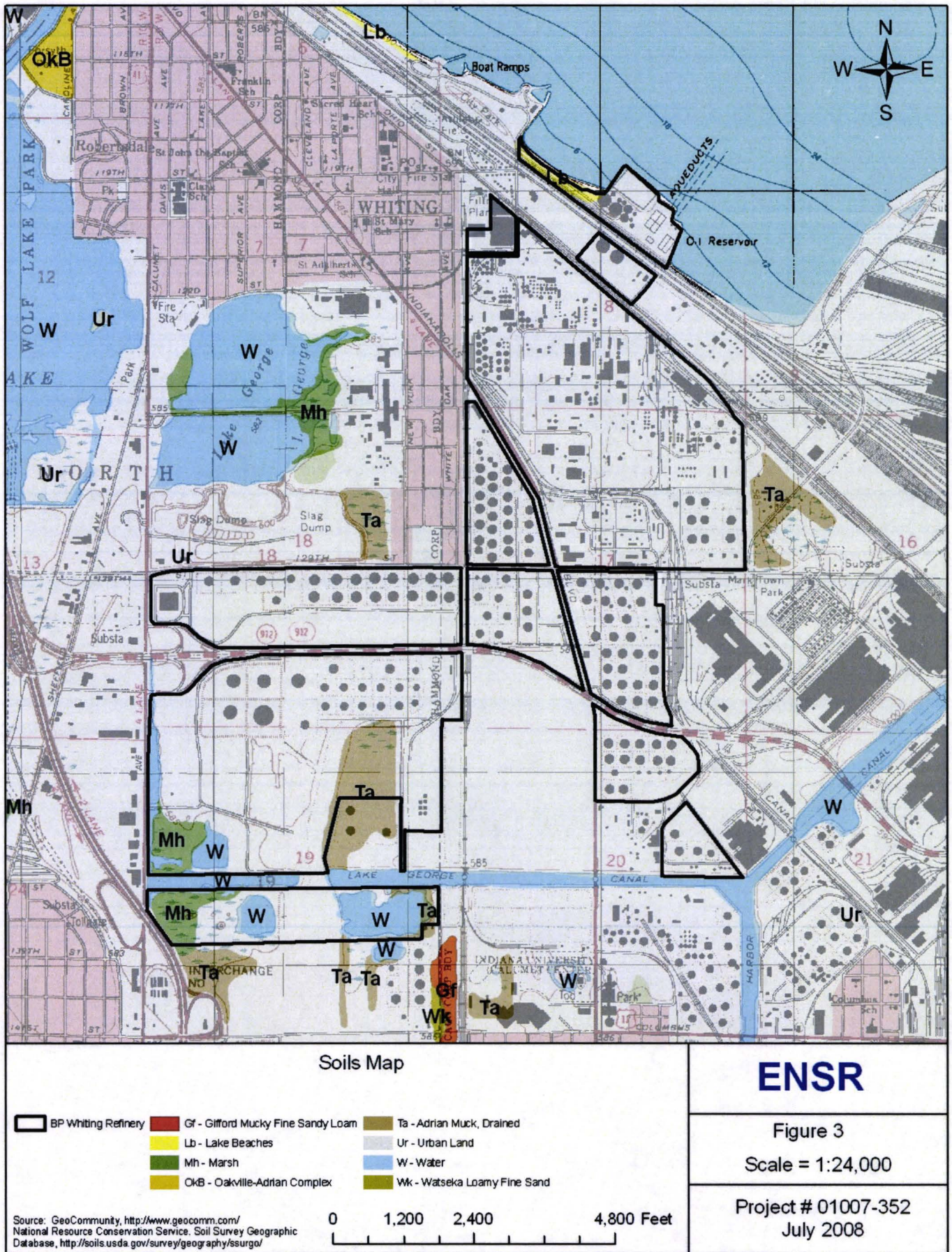


Figure 4 J&L Soils and Topographic Map

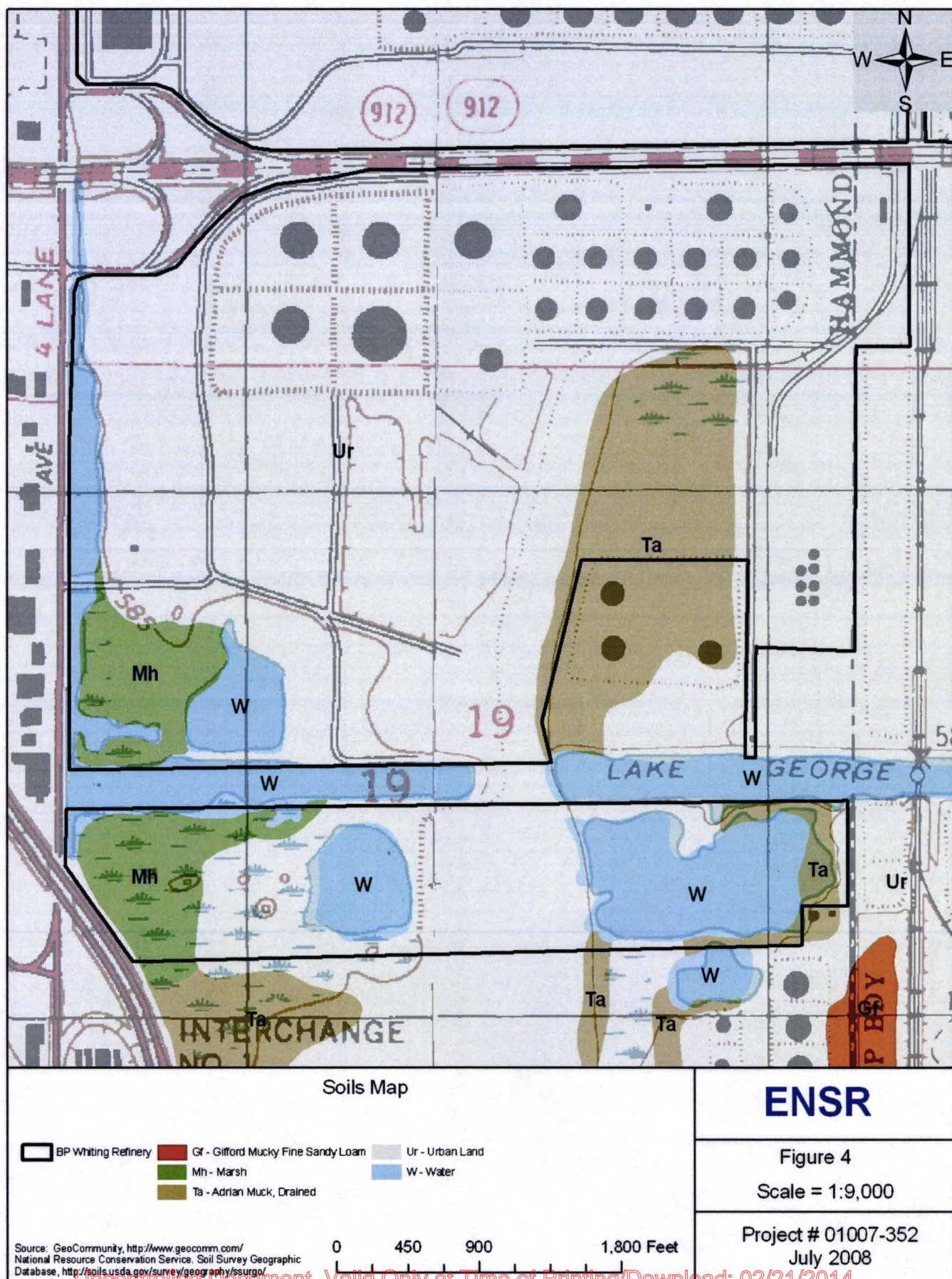


Figure 5 J&L Storm Water Map

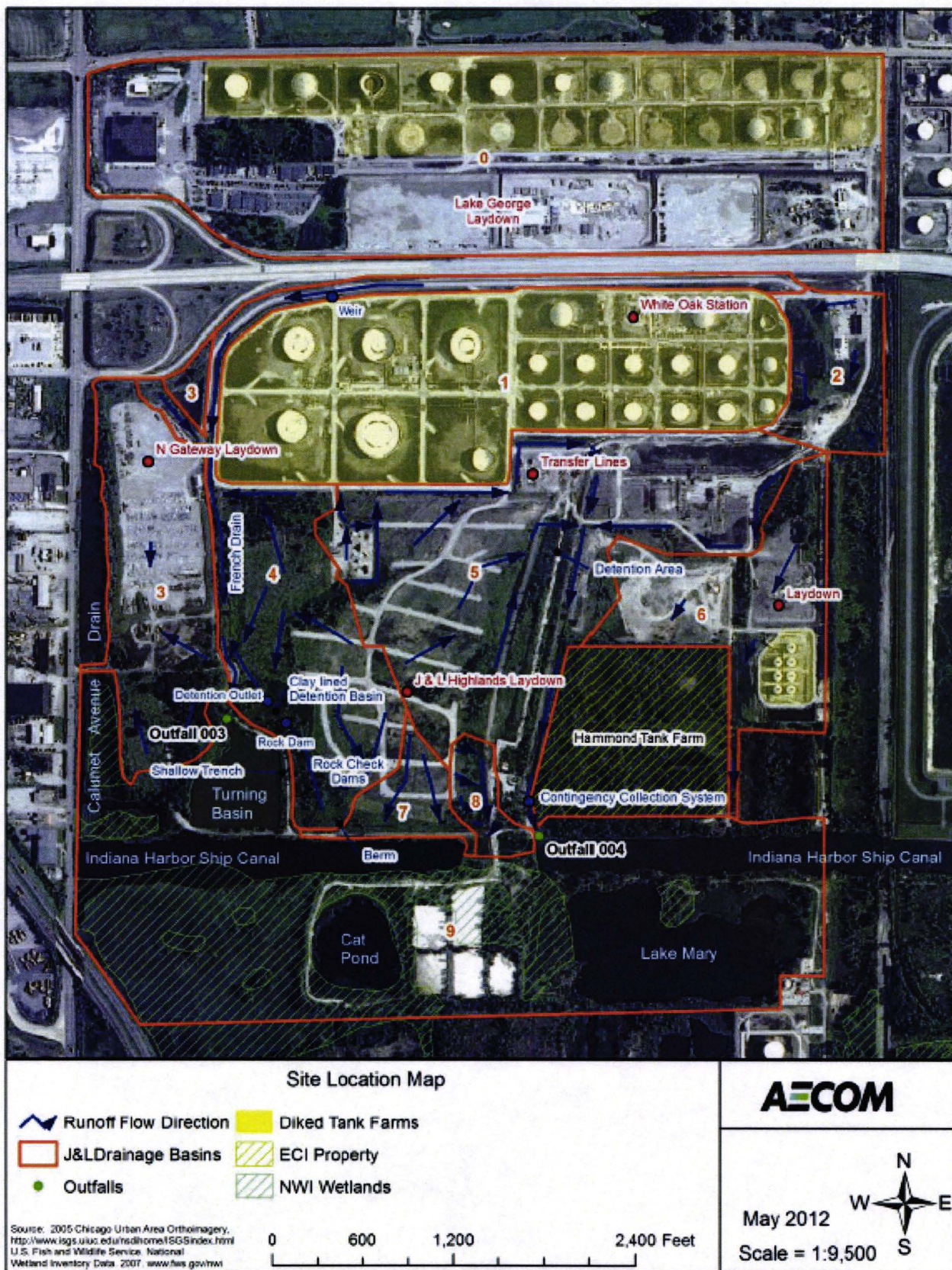


Figure 6 Aerial Ortho-image of BP Whiting Refinery and Impervious Surface Estimate

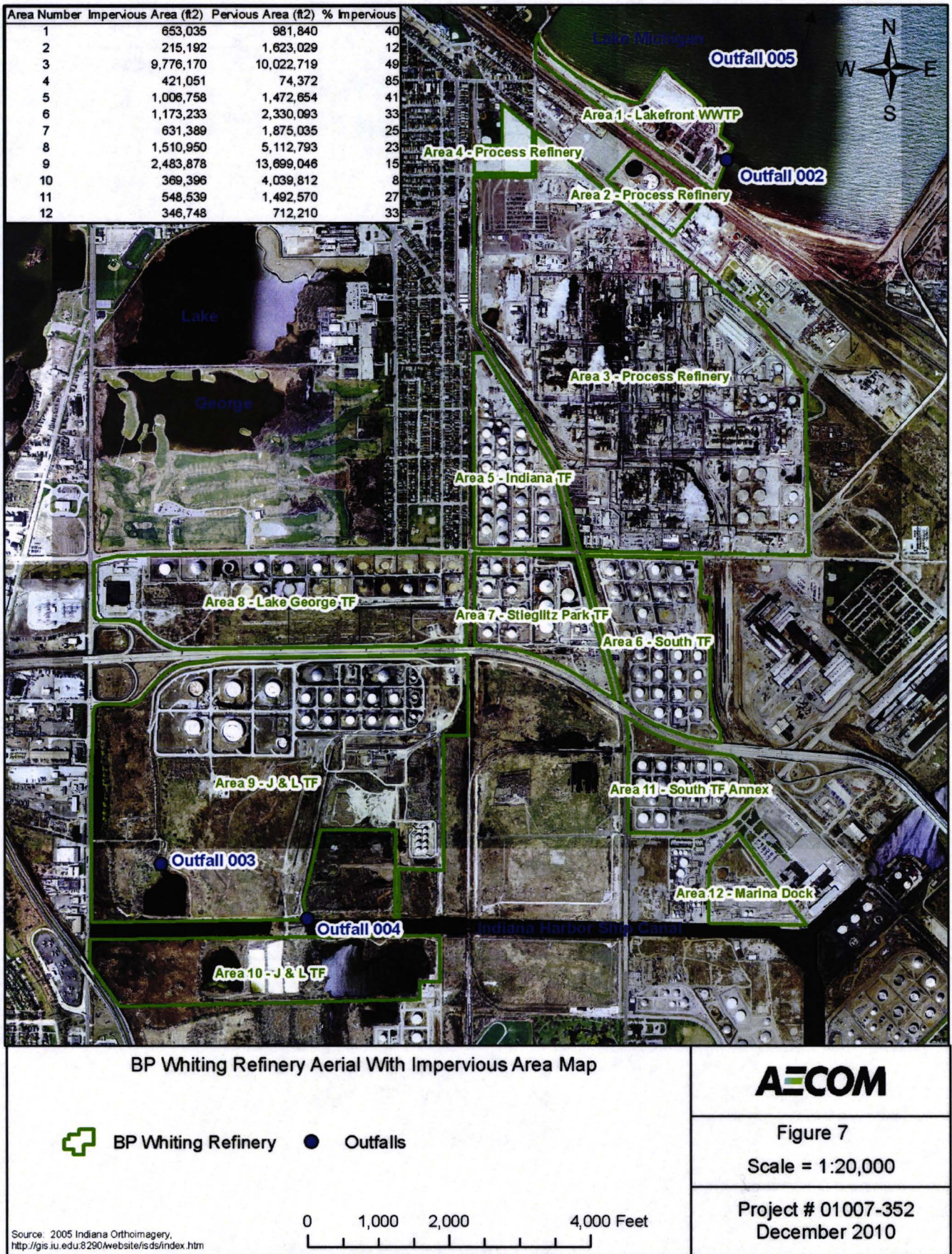
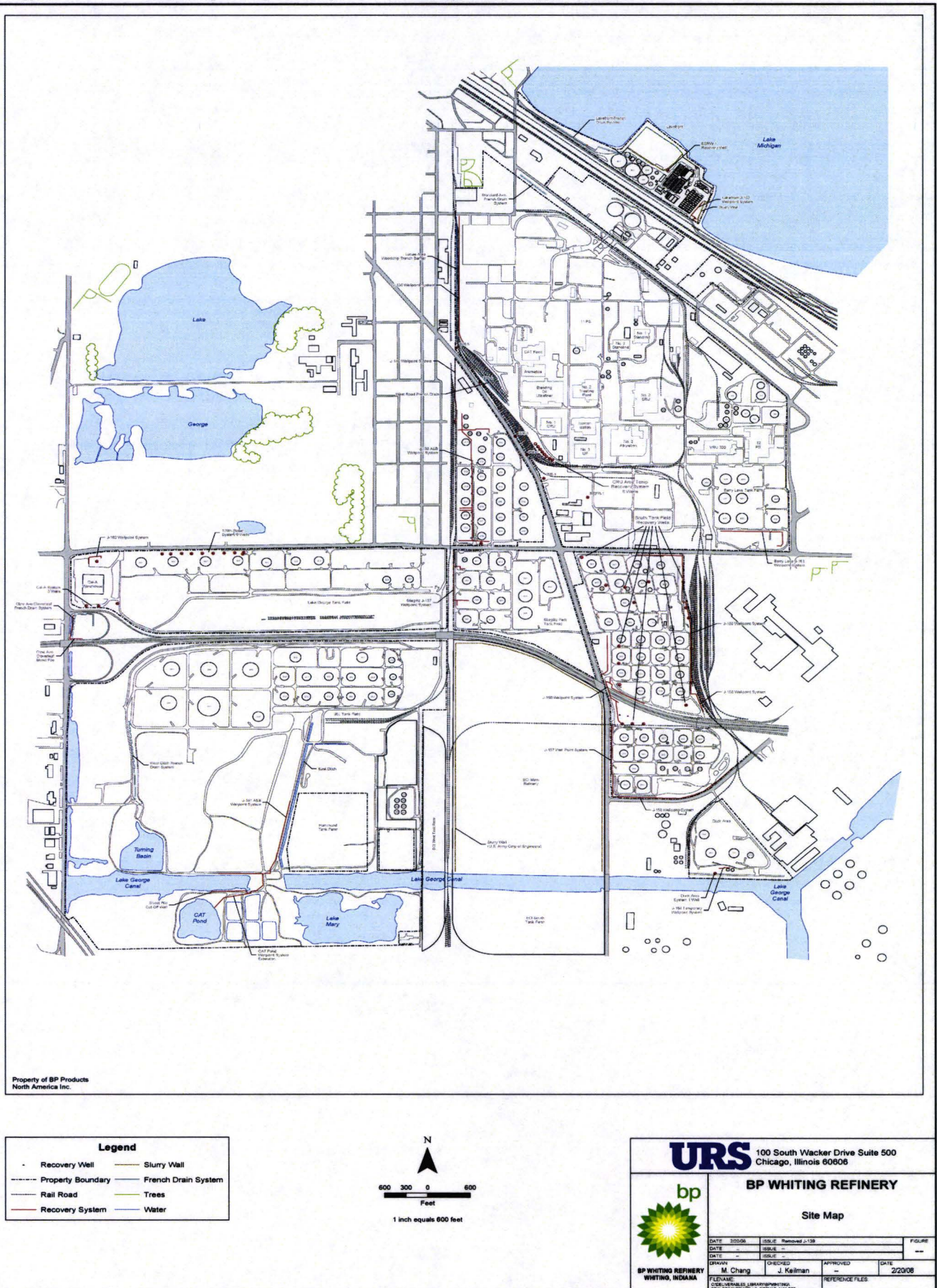
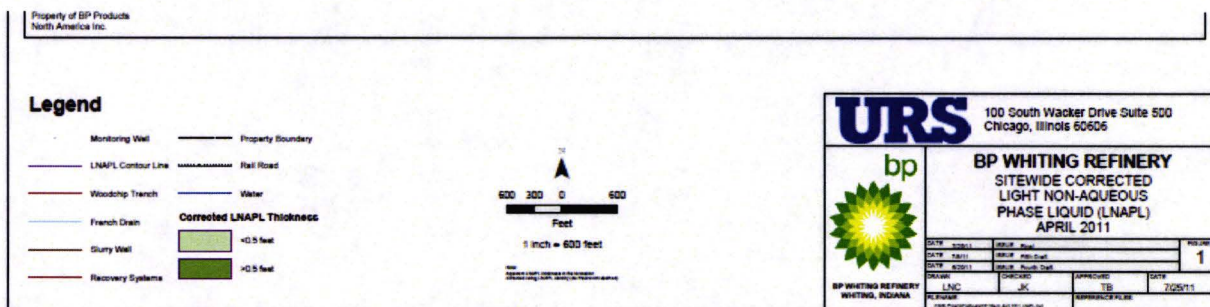
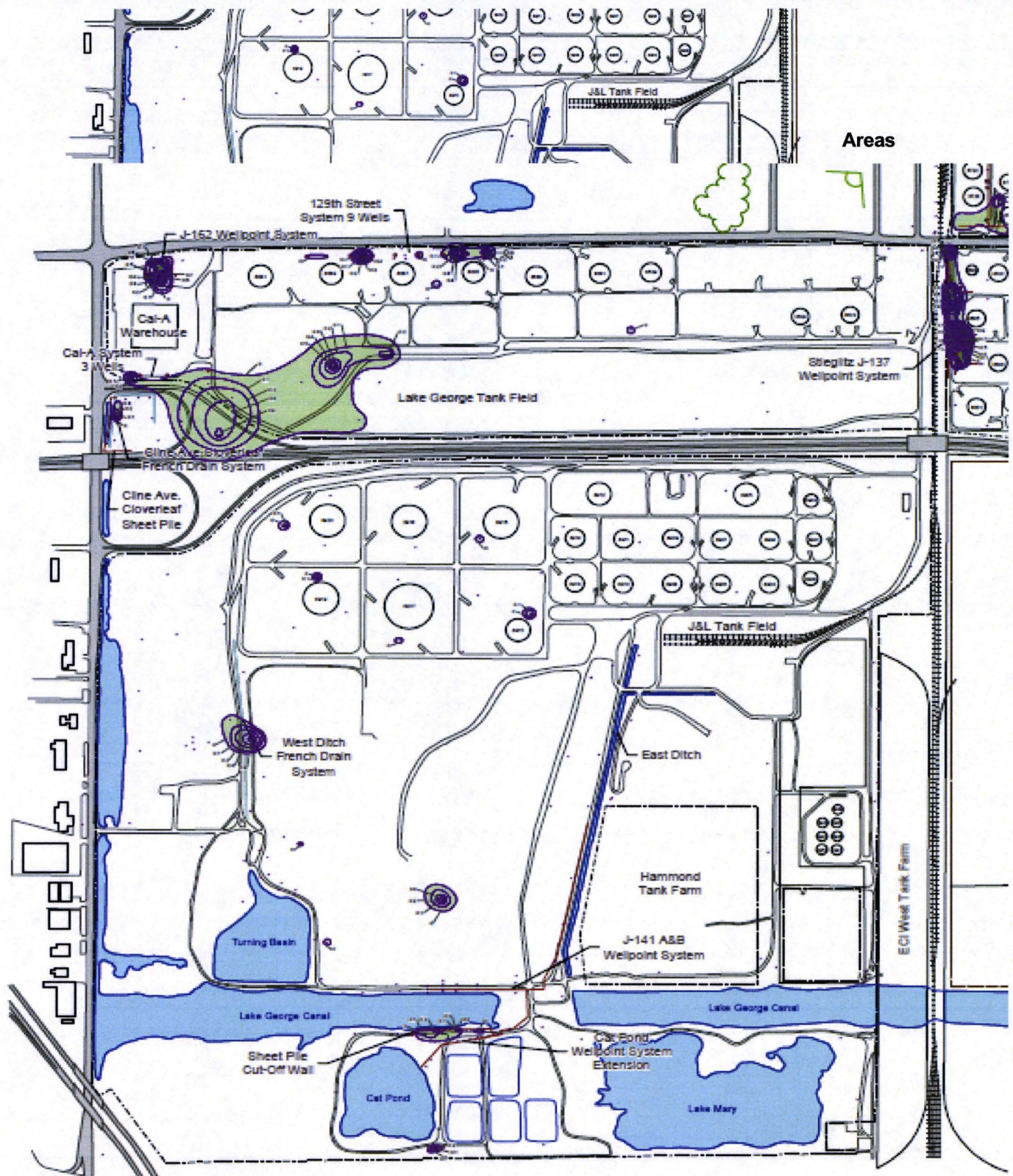


Figure 7

Refinery Wellpoint System and Major Drainage Structures







**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001.0

Document Review Date: 11/12/2013

Document Revision Date: 11/12/2013

Document Revision #: 5

Appendix A

Example Forms

The following forms are included as an example of the forms used for inspections. Please refer to the environmental website for current versions of the forms identified as

[EF2001.1 J&L Storm Water Outfall 3&4 Quarterly Inspection Checklist](#)

[EF2001.2 J&L and Lake George Areas Quarterly Inspection Checklist](#)

[EF2001.3 Annual Comprehensive Site Compliance Evaluation](#)



J&L Storm Water Outfalls 003 and 004

Quarterly Inspection Checklist

| General Information | | | | |
|--|--|-------------------------|---|-------------------------|
| Date of Inspection | | Time | | |
| Weather Conditions (overcast, wind, temperature, rain, etc) | | | | |
| Has it rained or snow in last 2-3 days? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | |
| If yes, provide approximate rainfall depth: | | | | |
| | OUTFALL 3 Remarks: | | OUTFALL 4 Remarks: | |
| Is the outfall gate or valve open at the time of inspection? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| What is the water level at the western or eastern ditches? | <input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low | | Read the level off the gauge | |
| Is the gate or valve flooded, overflowed, bypassed, blocked with debris? | <input type="checkbox"/> Yes <input type="checkbox"/> No | If Yes, Please Explain: | <input type="checkbox"/> Yes <input type="checkbox"/> No | If Yes, Please Explain: |
| Is the ISCO flow meter free of debris? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are there any discharges at the time of inspection? If No, Continue on to the Next Page | <input type="checkbox"/> Yes <input type="checkbox"/> No | If Yes, Please Explain: | <input type="checkbox"/> Yes <input type="checkbox"/> No | If Yes, Please Explain: |
| Does the discharge have color, visible oil | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA | |



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number:

E2001.0

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

| | | | | |
|---|---|--|---|--|
| sheen? | (no discharge) | | (no discharge) | |
| Does the discharge have turbidity, foam, solids, and floatable? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA (no discharge) | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA (no discharge) | |
| Does the discharge have odor? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA (no discharge) | | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA (no discharge) | |
| | OUTFALL 3 | | OUTFALL 4 | |
| Other observation or recommendations?(i.e. housekeeping concerns) | <input type="checkbox"/> Yes <input type="checkbox"/> No | | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Inspection Summary (any immediate action needed): | | | | |
| <div>Sample</div> | | | | |
| Inspector | Name: Title: Contact: | | | |

Document ID WBU-DENV-4J01-45606



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number: E2001.0

Document Review Date: 11/12/2013

Document Revision Date: 11/12/2013

Document Revision # 5

Notes:

1. This inspection checklist is created by BP Whiting Business Unit under NPDES permit.
2. The checklist is for internal use and BP's self-inspection.
3. The goal is to ensure that the storm water discharge(s) meets NPDES requirement.
4. Please return inspection sheet to the Environmental Dept. Water SME, OMD CAS and OMD COS and
5. Review any actions needed with OMD.
6. OMD to provide any work order numbers and follow up.
7. Environmental Dept enters any KMS action items as needed and keep documentation.

Sample

Document ID WBU-DENV-4J01-45606



BP Whiting Business Unit
Environmental Management System Procedure Manual

Document Number:

E2001.0

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

J&L and Lake George Areas
Quarterly Inspection Checklist

| General Information | | | |
|--|--|------|---------|
| Inspection Sites to review: J&L and Lake George General Area | | | |
| Date of Inspection | | Time | |
| Weather Condition (overcast, wind, temperature, rain, etc) | | | |
| Has it rained or snow in last 2-3 days? <input type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| If yes, provide approximate rainfall depth: | | | |
| | | | |
| Storm Water Pollution | | | Remarks |
| Is tracking evident on roads or going out of gates? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Are there unprotected stock piles? Explain. *Note: stockpiles must be protected within two weeks per SWPPP | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Are there any material storage containers that do not have secondary containment or are not on a concreted pad area? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Are the containers labeled properly with name of contents? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Is the secondary containment well maintained? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |
| Is there evidence of equipment that is stored without the necessary protection (i.e. uncovered machinery under maintenance, compressors or nurse tanks without containment, etc.)? | <input type="checkbox"/> Yes <input type="checkbox"/> No | | |



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number:

E2001.0

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

| | | |
|---|--|--|
| Is there evidence of pollution entering process sewer drains or drainage ditches? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are there roads that need repair that are causing offsite tracking and/or flooding? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |

Sample

Document ID WBU-DENV-4J01-45606



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number:

E2001.0

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

| Storm Water Pollution | | Remarks |
|---|--|---------|
| Is there evidence of flooding? Where? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| If so, is there sheen on the surface? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is there evidence of storm water or pollution leaving the perimeter or property boundary? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is there evidence of storm water or pollution entering the area from offsite? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is there sheen or foam on the canal surface? Explain | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are the west side detention pond, pond's berm, sluice gate outlet structure, and the rock dam in the west detention area in good condition? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is the east side detention basin in good condition? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Does it require maintenance? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is the diversion dike along upper crest of highlands diverting water to the west detention area in good condition? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are five (5) rock check dams in good condition? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are there any unmanaged erosive flows down the steep section of the dike? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |



**BP Whiting Business Unit
Environmental Management System Procedure Manual**

Document Number:

E2001.0

Document Review Date:

11/12/2013

Document Revision Date:

11/12/2013

Document Revision #

5

| | | |
|---|--|--|
| | | |
| Is the west detention basin outlet structure in good condition? Is it free of oil and debris? Does it drain the water properly? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Are the two sheet pile weirs in the southern section of the west ditch in good condition? Are they free of oil and debris? Do they maintain the water level properly? | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is the sheet pile weir in the northern section of the west ditch, north of the tank dikes in good condition? Is it free of oil and debris? Does it maintain the water level properly? | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Other observation or recommendations? (i.e. housekeeping concerns) | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Updating Current SP3 | | |
| Are there additional storm water discharges not approved? (check with Environmental Specialist). | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Is there evidence of improperly remediated spills? Note: Spills must be cleaned up within 72 hours of finding, per plan. | <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Inspection Summary and Any Immediate Action Needed | | |
| | | |
| Inspector | Name: Title: Contact: | |

Note:

1. This inspection checklist is created by BP Whiting Business Unit under NPDES permit.
2. The checklist is for internal use and BP's self-inspection.
3. The goal is to ensure that the storm water discharge meet NPDES requirement.
4. Please return inspection sheet to the Environmental Dept. Water SME, OMD CAS and OMD COS and review any actions needed with OMD.
5. OMD to provide any work order numbers and follow up
6. Environmental Dept enters any KMS action items as needed and keep documentation.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: ____ / ____ / ____ INSPECTOR NAME: _____ TITLE: _____ SIGNATURE: _____

| | | | | |
|---|--|--|--|--|
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP Implementation | Describe additional/revised BMPs or corrective actions and their date(s) of Implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP Implementation | Describe additional/revised BMPs or corrective actions and their date(s) of Implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP Implementation | Describe additional/revised BMPs or corrective actions and their date(s) of Implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP Implementation | Describe additional/revised BMPs or corrective actions and their date(s) of Implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |

**(Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS**

EVALUATION DATE: ____ / ____ / ____ INSPECTOR NAME: _____ TITLE: _____ SIGNATURE: _____

| | | | | |
|---|--|---|--|--|
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP implementation | Describe additional/revised BMPs or corrective actions and their date(s) of implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP implementation | Describe additional/revised BMPs or corrective actions and their date(s) of implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP implementation | Describe additional/revised BMPs or corrective actions and their date(s) of implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |
| POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP) | HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | If yes, to either question, complete the next two columns of this form | Describe deficiencies in BMPs or BMP implementation | Describe additional/revised BMPs or corrective actions and their date(s) of implementation |
| | ARE ADDITIONAL/REVISED BMPs NECESSARY? <input type="checkbox"/> YES <input type="checkbox"/> NO | | | |

Appendix B
NPDES Permit IN0000108 Cross Reference with SWPPP for
Outfalls 003 and 004

Document ID WBU-DENV-4J01-45606

| Permit IN0000108 Content Requirement Under Part I.D.2. | SWPPP Response Section |
|--|---|
| a. | Section 2.0 and Table 1 |
| b. | Section 4.0 |
| b.(1) | Figure 4 |
| b.(2) | Figures 2 and 5 |
| b.(3) | Figure 2 |
| b.(4) | Section 4.0 |
| b.(4)(A) | Section 4.0 and Table 4 |
| b.(4)(B) | Section 4.0 and SPCC Plan |
| b.(4)(C) | Section 4.6 |
| b.(4)(D) | Section 4.4 and Table 3 |
| b.(4)(E) | Section 4.0, with most details in Section 4.5 |
| b.(5)(A) | Section 5.0 |
| b.(5)(B) | Sections 3.4 and 3.5 |
| b.(5)(C) | Section 5.1.4 |
| b.(6) | Section 5.2.2 |
| b.(7) | Section 7.1 |
| b.(8) | Section 8.2 |
| c.(1)(A) | Section 5.1.1 |
| c.(1)(B) | Section 5.1.2 |
| c.(1)(C) and (D) | Section 7.2 |
| c.(1)(E) | Section 6.1 |
| c.(2) | SPCC Plan and Section 5.4.1 |
| c.(3)(A) and (D) | Section 9.1.2 |
| c.(3)(B) and (C) | Section 5.2.5 |
| c.(4) | Section 5.4 |
| d. | Section 7.1 and 8.0 |
| e.(1) | Section 9.2 |